

DELMARVA POWER & LIGHT COMPANY
BEFORE THE
DELAWARE PUBLIC SERVICE COMMISSION
DIRECT TESTIMONY OF ROBERT B. HEVERT
DOCKET NO. _____

I. Introduction

1 **Q1. Please state your name, affiliation and business address.**

2 A1. My name is Robert B. Hevert. I am Managing Partner of Sussex Economic
3 Advisors, LLC (Sussex). My business address is 161 Worcester Road, Suite 503,
4 Framingham, Massachusetts 01701.

5 **Q2. On whose behalf are you submitting this Direct Testimony?**

6 A2. I am submitting this Direct Testimony before the Delaware Public Service
7 Commission (Commission) on behalf of Delmarva Power & Light Company
8 (Delmarva or the Company), a wholly-owned operating subsidiary of Pepco
9 Holdings, Inc. (PHI).

10 **Q3. Please describe your educational background.**

11 A3. I hold a Bachelor's degree in Business and Economics from the University of
12 Delaware, and an MBA with a concentration in Finance from the University of
13 Massachusetts. I also hold the Chartered Financial Analyst designation.

14 **Q4. Please describe your experience in the energy and utility industries.**

15 A4. I have worked in regulated industries for over twenty five years, having
16 served as an executive and manager with consulting firms, a financial officer of a
17 publicly-traded natural gas utility (at the time, Bay State Gas Company), and an
18 analyst at a telecommunications utility. In my role as a consultant, I have advised
19 numerous energy and utility clients on a wide range of financial and economic issues,

1 including corporate and asset-based transactions, asset and enterprise valuation,
2 transaction due diligence, and strategic matters. As an expert witness, I have
3 provided testimony in approximately 100 proceedings regarding various financial and
4 regulatory matters before numerous state utility regulatory agencies and the Federal
5 Energy Regulatory Commission. A summary of my professional and educational
6 background, including a list of my testimony in prior proceedings, is included in
7 Attachment A to my Direct Testimony.

II. Purpose and Overview of Testimony

8 **Q5. What is the purpose of your Direct Testimony?**

9 A5. The purpose of my Direct Testimony is to present evidence and provide a
10 recommendation regarding the Company's Cost of Equity (sometimes referred to as
11 the Return on Equity or ROE) and to provide an assessment of the capital structure to
12 be used for ratemaking purposes, as proposed in the Direct Testimony of Company
13 Witness Boyle. My analyses and conclusions are supported by the data presented in
14 Schedule (RBH)-1 through Schedule (RBH)-8, which have been prepared by me or
15 under my direction.

16 **Q6. What are your conclusions regarding the appropriate Cost of Equity and capital
17 structure for the Company?**

18 A6. My analyses indicate that the Company's Cost of Equity currently is in the
19 range of 10.25% to 11.00%, and within that range, it is my view that an ROE of
20 10.50% is reasonable and appropriate. Consequently, the Company's proposed ROE,
21 10.25%, lies at the low end of that range. As such, I conclude that the Company's
22 proposal is reasonable, if not conservative. As to its proposed capital structure, which

1 includes 49.22% common equity and 50.78% long-term debt, I conclude that the
2 Company's proposal is consistent with the capital structures that have been in place
3 over several fiscal quarters at comparable operating utility companies. In light of its
4 ongoing need to access external capital, and given the consistency of its proposal with
5 similarly-situated utility companies, I conclude that the Company's proposed capital
6 structure is reasonable and appropriate.

7 **Q7. Please provide a brief overview of the analyses that led to your ROE**
8 **recommendation.**

9 A7. Equity analysts and investors use multiple methods to develop their return
10 requirements for investments. In order to develop my ROE recommendation, I relied
11 on three widely-accepted approaches: the Constant Growth Discounted Cash Flow
12 (DCF) model; the Capital Asset Pricing Model (CAPM); and the Bond Yield Plus
13 Risk Premium approach.

14 My recommendations and conclusions also consider the risks associated with
15 (1) the Company's comparatively small size; and (2) flotation costs associated with
16 equity issuances. While I did not make any explicit adjustments to my ROE
17 estimates for those factors, I did take them into consideration in determining the range
18 in which the Company's Cost of Equity likely falls.

19 **Q8. How is the remainder of your Direct Testimony organized?**

20 A8. The remainder of my Direct Testimony is organized as follows:

- 21 • Section III – Discusses the regulatory guidelines and financial
22 considerations pertinent to the development of the cost of capital;

- 1 • Section IV – Explains my selection of the proxy group used to develop
- 2 my analytical results;
- 3 • Section V – Explains my analyses and the analytical bases for my
- 4 ROE recommendation;
- 5 • Section VI – Provides a discussion of specific business risks that have
- 6 a direct bearing on the Company's Cost of Equity;
- 7 • Section VII – Highlights the current capital market conditions and
- 8 their effect on the Company's Cost of Equity;
- 9 • Section VIII – Addresses the reasonableness of the Company's
- 10 proposed capital structure; and
- 11 • Section IX – Summarizes my conclusions and recommendations.

III. Regulatory Guidelines and Financial Considerations

12 **Q9. Please provide a brief summary of the guidelines established by the United**
13 **States Supreme Court (the Court) for the purpose of determining the ROE.**

14 **A9. The Supreme Court established the guiding principles for establishing a fair**
15 **return for capital in two cases: (1) *Bluefield Water Works and Improvement Co. v.***
16 ***Public Service Comm'n of West Virginia (Bluefield)*; and (2) *Federal Power Comm'n***
17 ***v. Hope Natural Gas Co. (Hope)*.¹ In those cases, the Court recognized that the fair**
18 **rate of return on equity should be: (1) comparable to returns investors expect to earn**
19 **on other investments of similar risk; (2) sufficient to assure confidence in the**
20 **company's financial integrity; and (3) adequate to maintain and support the**

¹ *Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923); *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

company's credit and to attract capital.

Q10. Does Delaware precedent provide similar guidance?

A10. Yes. In Order No. 8011, for example, the Commission stated:

The requirement of a fair return recognizes that utilities compete for capital with other investments. Accordingly, the return which a utility investor can expect should be commensurate with the returns that could be expected on other comparable-risk investments. See J. BONBRIGHT, A. DANIELSON, and D. KAMERSCHEN, *Principles of Public Utility Rates*, at 316 (2d ed. 1988). In keeping with this, the United States and Delaware Supreme Courts have held that the return to a utility should be sufficient to assure confidence in the utility's financial integrity, to maintain its credit, and to attract capital. *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944); *Bluefield Water Works and Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 579 (1923); *Application of Wilmington Suburban Water Co.*, 211 A.2d 602 (Del. 1965).²

Based on those standards, the authorized ROE should provide the Company with the opportunity to earn a fair and reasonable return, and should enable efficient access to external capital under a variety of market conditions.

IV. Proxy Group Selection

Q11. As a preliminary matter, why is it necessary to select a group of proxy companies to determine the Cost of Equity for Delmarva?

A11. Since the ROE is a market-based concept, and Delmarva is not a publicly traded entity, it is necessary to establish a group of comparable publicly-traded companies to serve as its "proxy." Even if Delmarva were a publicly traded entity, short-term events could bias its market value during a given period of time. A significant benefit of using a proxy group is that it serves to moderate the effects of

² Public Service Commission of the State of Delaware, Docket No. 09-414, Order No. 8011, *In the Matter of the Application of Delmarva Power & Light Company for an Increase in Electric Base Rates and Miscellaneous Tariff Changes* (Filed September 18, 2009), August 9, 2011, at 112.

1 anomalous, temporary events associated with any one company.

2 **Q12. Does the selection of a proxy group suggest that analytical results will be tightly**
3 **clustered around average (i.e., mean) results?**

4 A12. No. The DCF approach, for example, defines the Cost of Equity as the sum of
5 the expected dividend yield and projected long-term growth. Despite the care taken
6 to ensure risk comparability, market expectations with respect to future risks and
7 growth opportunities will vary from company to company. Therefore, even within a
8 group of similarly situated companies, it is common for analytical results to reflect a
9 seemingly wide range. At issue, then, is how to estimate the Cost of Equity from
10 within that range. That determination necessarily must consider a wide range of both
11 empirical and qualitative information.

12 **Q13. Please provide a summary profile of Delmarva.**

13 A13. Delmarva is a wholly-owned operating subsidiary of PHI (NYSE: POM). The
14 Company provides electric transmission, distribution, and default supply service to
15 approximately 303,000 customers in Delaware and 200,000 customers in Maryland.³
16 The Company also provides natural gas supply and distribution service to
17 approximately 125,000 customers in northern Delaware.⁴ PHI's current long-term
18 issuer credit rating from Standard & Poor's (S&P) is BBB+ (outlook: Stable), Baa3
19 (outlook: Stable) from Moody's Investors Service (Moody's), and BBB (outlook:
20 Stable) from FitchRatings (Fitch). Delmarva currently is rated BBB+ (outlook:
21 Stable) by S&P, Baa2 (outlook: Stable) by Moody's, and BBB+ (outlook: Stable) by

³ See, Pepco Holdings, SEC Form 10-K for the fiscal year ended December 31, 2012, at 8.

⁴ *Ibid.*, at 10.

1 Fitch.⁵

2 **Q14. How did you select the companies included in your proxy group?**

3 A14. I began with the universe of companies that Value Line classifies as Electric
4 Utilities, which includes a group of 49 domestic U.S. utilities, and applied the
5 following screening criteria:

- 6 • I excluded companies that do not consistently pay quarterly cash dividends;
- 7 • All of the companies in my proxy group have been covered by at least two
- 8 utility industry equity analysts;
- 9 • All of the companies in my proxy group have investment grade senior
- 10 unsecured bond and/or corporate credit ratings from S&P;
- 11 • I excluded companies whose regulated operating income over the three most
- 12 recently reported fiscal years represented less than 60.00% of combined
- 13 income;
- 14 • I excluded companies whose regulated electric operating income over the
- 15 three most recently reported fiscal years represented less than 90.00% of total
- 16 regulated operating income; and
- 17 • I eliminated companies that are currently known to be party to a merger, or
- 18 other significant transaction.

19 **Q15. Did you include PHI in your analysis?**

20 A15. No. In order to avoid the circular logic that would otherwise occur, it has
21 been my consistent practice to exclude the subject company (or its parent) from the
22 proxy group.

⁵ Source: SNL Financial.

1 Q16. Why did you include vertically integrated utilities in your proxy group, when
2 Delmarva is a transmission and distribution company?

3 A16. Although Delmarva is a transmission and distribution (T&D) company, there
4 are no "pure play" state-jurisdictional electric T&D companies that may be used as a
5 proxy for the Company's Delaware electric distribution operations. I therefore
6 concluded that including vertically integrated electric companies in my proxy group
7 is a reasonable approach for the purpose of estimating the Company's Cost of Equity.

8 Q17. What companies met those screening criteria?

9 A17. The criteria discussed above resulted in an initial proxy group of the following
10 13 companies: American Electric Power Company, Inc.; Cleco Corporation; Edison
11 International; Empire District Electric Company; Great Plains Energy Inc.; Hawaiian
12 Electric Industries, Inc.; IDACORP, Inc.; Otter Tail Corporation; Pinnacle West
13 Capital Corporation; PNM Resources, Inc.; Portland General Electric Company;
14 Southern Company; and Westar Energy, Inc.

15 Q18. Is this your final proxy group?

16 A18. No, I excluded Edison International (EIX) based on the most recently
17 available financial information. Specifically, EIX recorded a loss of \$1.7 billion in
18 2012 as a result of placing Edison Mission Energy, the subsidiary that owns and
19 operated unregulated electric generating assets (including Homer City) into Chapter
20 11 bankruptcy and the divestiture of its Homer City assets.⁶ In addition, EIX
21 recorded a \$1.05 billion loss resulting from an after-tax earnings charge (recorded in
22 the fourth quarter of 2011) relating to the impairment of its Homer City, Fisk,

⁶ See, Edison International, SEC Form 10-K for the fiscal year ended December 31, 2012, at 35.

1 Crawford, and Waukegan power plants, wind related charges, and other expenses.⁷
 2 Given the significant nature of those results, I have excluded EIX from the proxy
 3 group.

4 **Q19. Based on the criteria and issues discussed above, what is the composition of your**
 5 **proxy group?**

6 A19. The final proxy group is presented in Table 1.

7 **Table 1: Final Proxy Group**

Company	Ticker
American Electric Power Company, Inc.	AEP
Cleco Corporation	CNL
Empire District Electric Company	EDE
Great Plains Energy Inc.	GXP
Hawaiian Electric Industries, Inc.	HE
IDACORP, Inc.	IDA
Otter Tail Corporation	OTTR
Pinnacle West Capital Corporation	PNW
PNM Resources, Inc.	PNM
Portland General Electric Company	POR
Southern Company	SO
Westar Energy, Inc.	WR

8

V. Cost of Equity Analysis

9 **Q20. Please briefly discuss the ROE in the context of the regulated rate of return.**

10 A20. Regulated utilities primarily use common stock and long-term debt to finance
 11 their capital investments. The overall rate of return (ROR) weighs the costs of the
 12 individual sources of capital by their respective book values. While the cost of debt

⁷ *Ibid.*, at 35-36.

1 and cost of preferred stock can be directly observed, the Cost of Equity is market-
2 based and, therefore, must be estimated based on observable market information.

3 **Q21. How is the required ROE determined?**

4 A21. I estimated the ROE using analyses based on market data to quantify a range
5 of investor expectations of required equity returns. By their very nature, quantitative
6 models produce a range of results from which the market required ROE must be
7 estimated. As discussed throughout my Direct Testimony, that estimation must be
8 based on a comprehensive review of relevant data and information, and does not
9 necessarily lend itself to a strict mathematical solution. Consequently, the key
10 consideration in determining the ROE is to ensure that the overall analysis reasonably
11 reflects investors' view of the financial markets in general and the subject company
12 (in the context of the proxy companies) in particular.

13 ***Constant Growth DCF Model***

14 **Q22. Are DCF models widely used in regulatory proceedings?**

15 A22. Yes. In my experience, the Constant Growth DCF model is widely
16 recognized in regulatory proceedings, as well as in financial literature. Nonetheless,
17 neither the DCF nor any other model should be applied without considerable
18 judgment in the selection of data and the interpretation of results.

19 **Q23. Please describe the DCF approach.**

20 A23. The DCF approach is based on the theory that a stock's current price
21 represents the present value of all expected future cash flows. In its simplest form,
22 the DCF model expresses the Cost of Equity as the sum of the expected dividend
23 yield and long-term growth rate, and is expressed as follows:

$$P = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_\infty}{(1+k)^\infty} \quad \text{Equation [1]}$$

where P represents the current stock price, $D_1 \dots D_\infty$ represent expected future dividends, and k is the discount rate, or required ROE. Equation [1] is a standard present value calculation that can be simplified and rearranged into the familiar form:

$$k = \frac{D_0 (1+g)}{P} + g \quad \text{Equation [2]}$$

Equation [2] often is referred to as the "Constant Growth DCF" model, in which the first term is the expected dividend yield and the second term is the expected long-term annual growth rate.

In essence, the Constant Growth DCF model assumes that the total return received by investors includes the dividend yield, and the rate of growth. As explained below, under the model's assumptions, the rate of growth equals the rate of capital appreciation. That is, the model assumes that the investor's return is the sum of the dividend yield and the increase in the stock price.

Q24. What assumptions are required for the Constant Growth DCF model?

A24. The Constant Growth DCF model assumes: (1) a constant average annual growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings multiple; and (4) a discount rate greater than the expected growth rate. Under those assumptions, dividends, earnings, book value, and the stock price all grow at the same, constant rate.

Q25. What market data did you use to calculate the dividend yield component of your DCF model?

A25. The dividend yield is based on the proxy companies' current annualized

1 dividend, and average closing stock prices over the 30-, 90-, and 180-trading day
2 periods as of February 15, 2013.

3 **Q26. Why did you use three averaging periods to calculate an average stock price?**

4 A26. I did so to ensure that the model's results are not skewed by anomalous events
5 that may affect stock prices on any given trading day. At the same time, the
6 averaging period should be reasonably representative of expected capital market
7 conditions over the long term. In my view, using 30-, 90-, and 180-day averaging
8 periods reasonably balances those concerns.

9 **Q27. Did you make any adjustments to the dividend yield to account for periodic**
10 **growth in dividends?**

11 A27. Yes. Since utilities increase their quarterly dividends at different times
12 throughout the year, it is reasonable to assume that dividend increases will be evenly
13 distributed over calendar quarters. Given that assumption, it is appropriate to
14 calculate the expected dividend yield by applying one-half of the long-term growth
15 rate to the current dividend yield.⁸ That adjustment ensures that the expected
16 dividend yield is representative of the coming twelve-month period, and does not
17 overstate the dividends to be paid during that time.

18 **Q28. Is it important to select appropriate measures of long-term growth in applying**
19 **the DCF model?**

20 A28. Yes. In its Constant Growth form, the DCF model (*i.e.*, as presented in
21 Equation [2] above) assumes a single growth estimate in perpetuity. This assumption
22 requires a fixed payout ratio, and the same constant growth rate for earnings per share

⁸ See, Schedule (RBH)-1.

1 (EPS), dividends per share, and book value per share. Since dividend growth can
2 only be sustained by earnings growth, the model should incorporate a variety of
3 measures of long-term earnings growth.

4 **Q29. Please summarize your inputs to the Constant Growth DCF model.**

5 A29. I used the following inputs for the price and dividend terms:

- 6 1. The average daily closing prices for the 30-, 90-, and 180-trading days
7 ended February 15, 2013, for the term P_0 ; and
- 8 2. The annualized dividend per share as of February 15, 2013, for the
9 term D_0 .

10 I then calculated my DCF results using each of the following growth terms:

- 11 1. The Zacks consensus long-term earnings growth estimates;
- 12 2. The First Call consensus long-term earnings growth estimates; and
- 13 3. The Value Line long-term earnings growth estimates.

14 **Q30. How did you calculate the high and low DCF results?**

15 A30. I calculated the proxy group mean high DCF results by using the maximum
16 EPS growth rate as reported by Value Line, Zacks, and First Call for each proxy
17 group company in combination with the dividend yield for each of the proxy group
18 companies. The proxy group mean high results then reflect the average of the
19 maximum DCF results for the proxy group as a whole. I used a similar approach to
20 calculate the proxy group mean low results using instead the minimum of the Value
21 Line, Zacks, and First Call growth rates for each company.

22 **Q31. Did you make any adjustments to the growth rates in your DCF analyses?**

23 A31. Yes. I note that the Value Line EPS growth estimate for Otter Tail Power

(OTTR) is more than two standard deviations from the unadjusted group mean. At the same time, earnings growth estimates from Zacks and First Call for OTTR are somewhat below the group mean, and are relatively similar to each other. Rather than eliminating OTTR's DCF estimates altogether, therefore, I removed the Value Line growth estimate.⁹

Q32. What are the results of your DCF analysis?

A32. My Constant Growth DCF results are summarized in Table 2, below (*see also*, Schedule (RBH)-1).

Table 2: DCF Results¹⁰

	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
30-Day Average	9.00%	10.21%	11.63%
90-Day Average	9.09%	10.30%	11.71%
180-Day Average	9.08%	10.29%	11.71%

Q33. Did you give any weight to the Mean Low DCF results in developing your ROE range and recommendation?

A33. No, the mean low results are well below any reasonable estimate of the Company's Cost of Equity. Of the 1,392 rate cases since 1980 that disclosed the awarded ROE, for example, only one included an authorized ROE of 9.00% or lower.¹¹ On that basis alone, the mean low results are highly improbable. As such, I did not give those estimates any weight in arriving at my ROE range and recommendation.

⁹ Please note that removing outlying growth rates may be considered for both high and low estimates. An alternative, and very reasonable approach, would be to consider both mean and median results.
¹⁰ DCF results presented in Table 2 are unadjusted (*i.e.*, prior to any adjustment for flotation costs).
¹¹ Source: Regulatory Research Associates.

1 Q34. Did you undertake any additional analyses to support your recommendation?

2 A34. Yes. As noted earlier, I also applied the CAPM and Risk Premium analyses in
3 estimating the Company's Cost of Equity.

4 *CAPM Analysis*

5 Q35. Please briefly describe the general form of the CAPM analysis.

6 A35. The CAPM analysis is a risk premium approach that estimates the Cost of
7 Equity for a given security as a function of a risk-free return plus a risk premium (to
8 compensate investors for the non-diversifiable or "systematic" risk of that security).
9 As shown in Equation [3], the CAPM is defined by four components, each of which
10 theoretically must be a forward-looking estimate:

11
$$k = r_f + \beta(r_m - r_f) \quad \text{Equation [3]}$$

12 where:

13 k = the required market ROE for a security;

14 β = the Beta coefficient of that security;

15 r_f = the risk-free rate of return; and

16 r_m = the required return on the market as a whole.

17 In Equation [3], the term $(r_m - r_f)$ represents the Market Risk Premium.¹²

18 According to the theory underlying the CAPM, since unsystematic risk can be
19 diversified away by adding securities to their investment portfolio, investors should
20 be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is
21 measured by the Beta coefficient, which is defined as:

¹² The Market Risk Premium is defined as the incremental return of the market over the risk-free rate.

$$\beta_j = \frac{\sigma_j}{\sigma_m} \times \rho_{j,m} \quad \text{Equation [4]}$$

Where σ_j is the standard deviation of returns for company "j," σ_m is the standard deviation of returns for the broad market (as measured, for example, by the S&P 500 Index), and $\rho_{j,m}$ is the correlation of returns in between company j and the broad market. The Beta coefficient therefore represents both relative volatility (*i.e.*, the standard deviation) of returns, and the correlation in returns between the subject company and the overall market.

Intuitively, higher Beta coefficients indicate that the subject company's returns have been relatively volatile, and have moved in tandem with the overall market. Consequently, if a company has a Beta coefficient of 1.00, it is as risky as the market and does not provide any diversification benefit.

Q36. Do you have concerns about the CAPM based on current and market conditions?

A36. Yes. For example, the risk-free rate, " r_f ," is represented by the yield on long-term U.S. Treasury securities. During periods of increased equity market volatility, investors tend to allocate their capital to low-risk securities such as Treasury bonds, thereby bidding down the yield on those securities. In addition, since the 2008 Lehman Brothers bankruptcy filing, the Federal Reserve has focused on maintaining low long-term interest rates. Thus, even if investors were to allocate capital to more risky assets, Federal Reserve policy may have the continuing effect of maintaining low Treasury yields.

Even considering the effect of Federal Reserve policy, capital markets continue to change, by some measures quite significantly. For example, over the 90

1 trading days ended February 15, 2013, the 30-year Treasury yield ranged from a low
2 of 2.72% to a high of 3.23%. In addition (and as discussed later in my Direct
3 Testimony), the Equity Risk Premium is not constant, and tends to move in the
4 opposite direction as changes in interest rates occur. Consequently, the CAPM results
5 can be relatively volatile.

6 **Q37. With those observations in mind, what assumptions did you include in your**
7 **CAPM analysis?**

8 A37. Since utility assets represent long-term investments, I used two different
9 estimates of the long-term risk-free rate: (1) the current 30-day average yield on 30-
10 year Treasury bonds (*i.e.*, 3.12%); and (2) the near-term projected 30-year Treasury
11 yield (*i.e.*, 3.25%).¹³

12 **Q38. What Market Risk Premium did you use in your CAPM analysis?**

13 A38. Because the model is forward-looking, I developed two forward-looking
14 estimates of the Market Risk Premium. The first approach uses the market required
15 return, less the current 30-year Treasury bond yield. To estimate the market required
16 return, I calculated the average ROE based on the Constant Growth DCF model. To
17 do so, I relied on data from Bloomberg and Capital IQ, respectively. For both
18 Bloomberg and Capital IQ, I calculated the average expected dividend yield (using
19 the same one-half growth rate assumption described earlier) and combined that
20 amount with the average projected earnings growth rate to arrive at the average DCF
21 result. I then subtracted the current 30-year Treasury yield from that amount to arrive

¹³ See, Blue Chip Financial Forecasts, Vol. 32, No. 2, February 1, 2013, at 2. Consensus projections of the 30-year Treasury yield for the six quarters ending June 2014. As noted above, the 30-year Treasury yield ranged from 2.72% to 3.23% in the 90 trading days ending February 15, 2013.

1 at the market DCF-derived *ex-ante* Market Risk Premium estimate. The results of
2 those two calculations are provided in Schedule (RBH)-2.

3 **Q39. Please describe the second approach.**

4 A39. The second approach is based on the fundamental financial principle that
5 investors require higher returns for higher risk. In essence, this approach uses
6 market-based data to determine whether investors expect future risk to be higher,
7 lower, or approximately equal to historical market risk. To the extent the market
8 expects risk to be higher than historical levels, the Market Risk Premium would be
9 higher than historical levels; the converse also is true.

10 In terms of its application, this approach relies on the Sharpe, which is the
11 ratio of the long-term average Risk Premium for the S&P 500 Index, to the risk of
12 that index.¹⁴ The formula I used for calculating the Sharpe Ratio is expressed as
13 follows:

$$S_x = \frac{(R_x - R_f)}{\sigma_x} \quad \text{Equation [5]}$$

14 where:

15 S_x = Sharpe Ratio for the S&P 500 Index;

16 R_x = the average return of the S&P 500;

17 R_f = the rate of return of a risk-free security; and

18 σ_x = the standard deviation of the return on the S&P 500.

19 As shown in Schedule (RBH)-2, I calculated the constant Sharpe Ratio as the
20

¹⁴ The Sharpe Ratio is relied upon by financial professionals to assess the incremental return received for holding a risky (*i.e.*, more volatile) asset rather than a risk-free (*i.e.*, less volatile) asset. Risk is measured by the standard deviation of returns. That is, the higher the volatility of returns, the greater the risk.

ratio of the historical Market Risk Premium of 6.60% (the numerator of Equation [5] above)¹⁵ and the historical standard deviation of 20.30% (the denominator of Equation [5]).¹⁶ Equation [5] can be re-arranged as:

$$MRP = S_x \times \sigma_{ex} \quad \text{Equation [6]}$$

Equation [6] basically states that the expected Market Risk Premium is determined by investors' historical required return per unit of risk (the historical Sharpe Ratio) times expected market risk. To measure expected market risk, I used the 30-day average of the Chicago Board Options Exchange's (CBOE) three-month volatility index (*i.e.*, the VXV) and the average of settlement prices over the same 30-day period of futures on the CBOE's one-month volatility index (*i.e.*, the VIX) for July 2013 through September 2013. Both of those indices are market-based, observable measures of investors' expectations regarding future market volatility.

Q40. What Beta coefficients did you use in your CAPM model?

A40. My approach includes the average reported Beta coefficient from Bloomberg and Value Line for each of the proxy group companies. While both of those services adjust their calculated (or raw) Beta coefficients to reflect the tendency of the Beta coefficient to regress to the market mean of 1.00, Value Line calculates the Beta coefficient over a five-year period, while Bloomberg's calculation is based on two

¹⁵ See, Morningstar Inc., 2013 Ibbotson SBBI Risk Premia Over Time Report, Long-Horizon Equity Risk Premia Table A-1, at 9.

¹⁶ The standard deviation is calculated from data provided by Morningstar in its annual Valuation Yearbook. (See, Morningstar Inc., Ibbotson SBBI 2012 Valuation Yearbook, Large Company Stocks: Total Returns Table B-1, at 168-169). I recognize that the VIX forward settlement prices are liquid for approximately six to eight months; nonetheless, that data represents a market-based measure of expected volatility that should be considered in estimating the *ex-ante* Market Risk Premium.

1 years of data.¹⁷

2 **Q41. What are the results of your CAPM analysis?**

3 A41. The results of my CAPM analysis are summarized in Table 3, below (*see also*,
4 Schedule (RBH)-4).

5 **Table 3: Summary of CAPM Results**

	<i>Sharpe Ratio Derived Market Risk Premium</i>	<i>Bloomberg Derived Market Risk Premium</i>	<i>Capital IQ Derived Market Risk Premium</i>
<i>Average Bloomberg Beta Coefficient</i>			
Current 30-Year Treasury (3.12%)	7.43%	10.19%	10.14%
Near Term Projected 30-Year Treasury (3.25%)	7.57%	10.32%	10.27%
<i>Average Value Line Beta Coefficient</i>			
Current 30-Year Treasury (3.12%)	7.44%	10.20%	10.15%
Near Term Projected 30-Year Treasury (3.25%)	7.57%	10.33%	10.28%

6

7 **Q42. Do you believe the CAPM results provide a reasonable range of ROE estimates**
8 **at this time?**

9 A42. Not entirely. As a practical matter, the low results are approximately 100
10 basis points below the lowest ROE ever authorized for an electric utility in at least 30
11 years. By that measure, the mean low results simply are not reasonable. As to the
12 remaining results, as noted earlier in my Direct Testimony, the intended consequence
13 of continued Federal intervention in the capital markets has been to maintain long-
14 term Treasury yields at historically low levels. Since the CAPM defines the Cost of

¹⁷ Please note that while, in Docket No. 11-528 I separately calculated Beta coefficients, in this instance there is no meaningful difference between the Bloomberg Beta coefficients and those calculated over a 18-month period. Consequently, and for the purpose of narrowing the scope of analytical issues, I have not included calculated Beta coefficients in this proceeding.

1 Equity in terms of Treasury yields, the effect of those actions to decrease, rather
2 substantially, the CAPM estimates. The effect of that policy, however, will not
3 continue indefinitely; consensus forecasts call for the 30-year Treasury yield to
4 increase to 4.70% percent (from the current level of approximately 3.00%) in the
5 2014-2018 timeframe.¹⁸ On balance, then, I do not believe that the results presented
6 in Table 3 fully reflect the appropriate range of ROE estimates.

7 ***Bond Yield Plus Risk Premium Approach***

8 **Q43. Please generally describe the Bond Yield Plus Risk Premium approach.**

9 A43. This approach is based on the basic financial tenet that, since equity investors
10 bear the residual risk of ownership, their returns are subject to more risk than are the
11 returns to bondholders. As such, equity holders require a premium over the returns
12 available to debt holders. Risk premium approaches, therefore, estimate the Cost of
13 Equity as the sum of an Equity Risk Premium¹⁹ and a bond yield. The Equity Risk
14 Premium is the difference between the historical Cost of Equity and long-term
15 Treasury yields. Since we are calculating the risk premium for electric utilities, a
16 reasonable approach is to use actual authorized returns for electric utilities as the
17 historical measure of the Cost of Equity.

18 **Q44. Please explain how you performed your Bond Yield Plus Risk Premium analysis.**

19 A44. As discussed above, I first defined the Risk Premium as the difference
20 between authorized ROEs and the then-prevailing level of long-term (*i.e.*, 30-year)
21 Treasury yield. I then gathered data from 1,392 electric utility rate proceedings

¹⁸ See, Blue Chip Financial Forecasts, Vol.31, No. 12, December 1, 2012, at 14.

¹⁹ The Equity Risk Premium is defined as the incremental return that an equity investment provides over a risk-free rate.

1 between January 1, 1980 and February 15, 2013.²⁰ In addition to the authorized ROE,
 2 I also calculated the average period between the filing of the case and the date of the
 3 final order (the lag period). In order to reflect the prevailing level of interest rates
 4 during the pendency of the proceedings, I calculated the average 30-year Treasury
 5 yield over the average lag period (approximately 201 days).

6 Because the data covers a number of economic cycles,²¹ the analysis also may
 7 be used to assess the stability of the Equity Risk Premium. As noted above, the
 8 Equity Risk Premium is not constant over time; prior research has shown that it is
 9 directly related to expected market volatility, and inversely related to the level of
 10 interest rates.²² That finding is particularly relevant given the historically low level of
 11 current Treasury yields.

12 **Q45. How did you model the relationship between interest rates and the Equity Risk**
 13 **Premium?**

14 A45. The basic method used was regression analysis, in which the observed Equity
 15 Risk Premium is the dependent variable, and the average 30-year Treasury yield is the
 16 independent variable. Relative to the long-term historical average, the analytical
 17 period includes interest rates and authorized ROEs that are quite high during one
 18 period (*i.e.*, the 1980s) and that are quite low during another (*i.e.*, the post-Lehman
 19 bankruptcy period). To account for that variability, I used the semi-log regression, in

²⁰ Source: Regulatory Research Associates.

²¹ See, National Bureau of Economic Research, *U.S. Business Cycle Expansion and Contractions*.

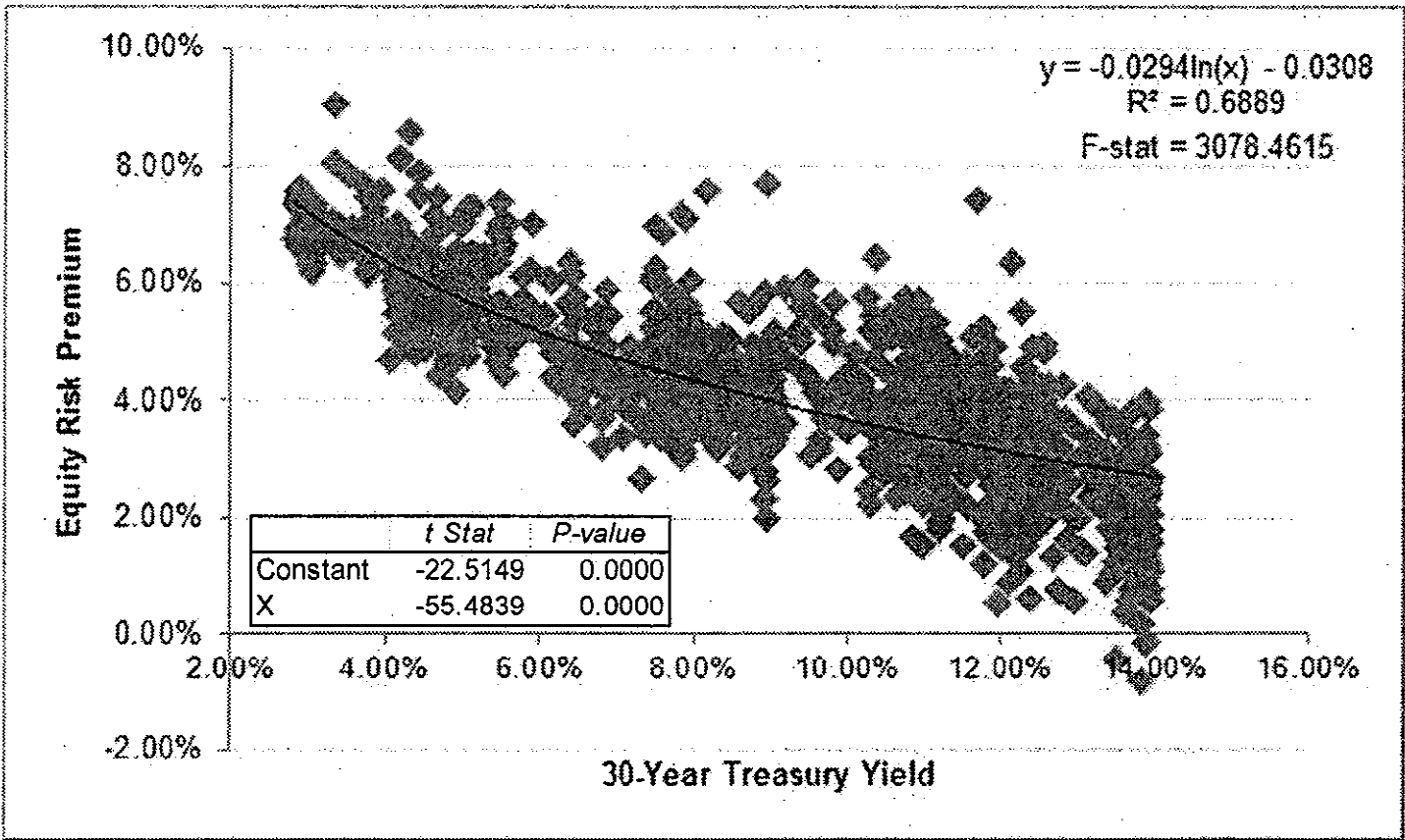
²² See, *e.g.*, Robert S. Harris and Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, Summer 1992, at 63-70; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985, at 33-45; and Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, *An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry*, Financial Management, Autumn 1995, at 89-95.

1 which the Equity Risk Premium is expressed as a function of the natural log of the
2 30-year Treasury yield:

3
$$RP = \alpha + \beta(\text{LN}(T_{30}))$$
 Equation [7]

4 As shown on Chart 1 (below), the semi-log form is useful when measuring an
5 absolute change in the dependent variable (in this case, the Risk Premium) relative to
6 a proportional change in the independent variable (the 30-year Treasury yield).

7 **Chart 1: Equity Risk Premium**



8 As Chart 1 illustrates, over time there has been a statistically significant,
9 negative relationship between the 30-year Treasury yield and the Equity Risk
10 Premium. Consequently, simply applying the long-term average Equity Risk
11 Premium of 4.39% would significantly understate the Cost of Equity and produce
12 results well below any reasonable estimate. Based on the regression coefficients in
13 Chart 1, however, the implied ROE is between 10.23% and 10.76% (see, Schedule
14 (RBH)-5).

VI. Business Risks

1 Q46. What additional information did you consider in assessing the analytical results
2 noted above?

3 A46. Because the analytical methods discussed above provide a range of estimates,
4 there are several additional factors that should be taken into consideration when
5 establishing a reasonable range for the Company's Cost of Equity. Those factors
6 include: (1) the Company's comparatively small size; and (2) flotation costs
7 associated with equity issuances.

8 *Small Size Premium*

9 Q47. Please explain the risk associated with small size.

10 A47. Both the financial and academic communities have long accepted the
11 proposition that the Cost of Equity for small firms is subject to a "size effect."²³
12 While empirical evidence of the size effect often is based on studies of industries
13 beyond regulated utilities, utility analysts have noted the risks associated with small
14 market capitalizations. Specifically, Ibbotson Associates noted that "[f]or small
15 utilities, investors face additional obstacles, such as smaller customer base, limited
16 financial resources, and a lack of diversification across customers, energy sources,
17 and geography. These obstacles imply a higher investor return."²⁴

18 Q48. How does Delmarva compare in size to the proxy companies?

19 A48. Delmarva is somewhat smaller than the average for the proxy group
20 companies, both in terms of number of customers and annual revenues. Because

²³ See, Mario Levis, *The record on small companies: A review of the evidence*, Journal of Asset Management, March 2002, for a review of literature relating to the size effect.

²⁴ Michael Annin, *Equity and the Small-Stock Effect*, Public Utilities Fortnightly, October 15, 1995.

1 Delmarva is not a separately traded entity, an estimated stand-alone market
2 capitalization for Delmarva must be calculated. Schedule (RBH)-6 shows this
3 calculation. The implied market capitalization is calculated by applying the median
4 market-to-book ratio for the proxy group of 1.35 to the Company's implied total
5 common stock book equity of \$0.37 billion.²⁵ The implied market capitalization
6 based on that calculation is \$0.50 billion, compared to the proxy group median of
7 \$2.58 billion, which indicates Delmarva is significantly smaller than the proxy group
8 average on a market capitalization basis.

9 **Q49. How did you evaluate the risks associated with the Company's relatively small**
10 **size?**

11 A49. In its *Risk Premia Over Time Report: 2012*, Morningstar Inc. (Morningstar)
12 calculates the size premium for deciles of market capitalizations relative to the S&P
13 500 Index. As shown on Schedule (RBH)-6, based on recent market data, the average
14 market capitalization of the proxy group is approximately \$7.14 billion, and the
15 median market capitalization of the proxy group is \$2.58 billion, which correspond to
16 the third and fifth deciles, respectively, of Morningstar's market capitalization data.
17 Based on the Morningstar analysis, the proxy group has a size premium of 0.92% to
18 1.70%. The implied market capitalization for Delmarva is approximately \$0.50
19 billion, which falls within the ninth decile and corresponds to a size premium of
20 2.70%, suggesting that a size premium as high as 178 basis points (2.70% – 0.92%) is
21 expected for Delmarva relative to the proxy group. However, rather than propose a
22 specific adjustment, I considered the effect of small size in determining where the

²⁵ Equity value of Delmarva's Delaware electric utility estimated from proposed rate base and recommended capital structure.

1 Company's ROE falls within the range of results.

2 ***Flotation Costs***

3 **Q50. What are flotation costs?**

4 A50. Flotation costs are the costs associated with the sale of new issues of common
5 stock. These include out-of-pocket expenditures for preparation, filing, underwriting,
6 and other costs of issuance.

7 **Q51. Are flotation costs part of the utility's invested costs or part of the utility's**
8 **expenses?**

9 A51. Flotation costs are part of capital costs, which are properly reflected on the
10 balance sheet under "paid in capital" rather than current expenses on the income
11 statement. Flotation costs are incurred over time, just as investments in rate base or
12 debt issuance costs. As a result, the great majority of flotation costs are incurred prior
13 to the test year, but remain part of the cost structure during the test year and beyond.

14 **Q52. How did you calculate the flotation cost recovery adjustment?**

15 A52. I modified the DCF calculation to provide a dividend yield that would
16 reimburse investors for issuance costs. My flotation cost adjustment recognizes the
17 costs of issuing equity that were incurred by PHI and the proxy group companies in
18 their most recent two issuances. As shown in Schedule (RBH)-7, an adjustment of
19 0.15% (*i.e.*, 15 basis points) reasonably represents flotation costs for the Company.

20 **Q53. Are you proposing to adjust your recommended ROE by 15 basis points to**
21 **reflect the effect of flotation costs on Delmarva's ROE?**

22 A53. No, I am not. Rather, I have considered the effect of flotation costs, in
23 addition to the Company's other business risks, in determining where the Company's

1 ROE falls within the range of results.

VII. Capital Market Environment

2 **Q54. Do economic conditions influence the required cost of capital and required**
3 **return on common equity?**

4 A54. Yes. As discussed in Section V, the models used to estimate the Cost of
5 Equity are meant to reflect, and therefore are influenced by, current and expected
6 capital market conditions.

7 **Q55. Have you reviewed any specific indices to assess the relationship between**
8 **current market conditions and investor return requirements?**

9 A55. Yes. I considered the relationship between Treasury yields and the Cost of
10 Equity as a principal measure of current capital market conditions. As discussed
11 below, this measure provides information that is relevant to the implementation of
12 models used to estimate the Cost of Equity and in the interpretation of the model
13 results.

14 *Relationship Between Historically Low Treasury Yields and the Cost of Equity*

15 **Q56. As a preliminary matter, has the Cost of Equity fallen in tandem with the recent**
16 **decline in long-term Treasury yields?**

17 A56. No. The fear of taking the risks of equity ownership has motivated many
18 investors to move their capital into the relative safety of Treasury securities. In doing
19 so, investors bid down yields to the point that they currently are receiving yields on
20 ten-year Treasury bonds that are below the rate of inflation.²⁶ In effect, those
21 investors have been willing to accept a *negative* real return on Treasury bonds rather

²⁶ See, for example, *Treasurys Slide After Lackluster Sale*, The Wall Street Journal, August 8, 2012.

1 than be subject to the risk of owning equity securities.

2 At the same time, the Federal Reserve's policy of buying longer-dated
3 Treasury securities and selling short-term securities also may have had the effect of
4 lowering long-term Treasury yields. That is, of course, the objective of the Federal
5 Reserve's "maturity extension program" which began in June 2011.²⁷ As the Federal
6 Reserve noted:

7 Under the maturity extension program, the Federal Reserve intends
8 to sell or redeem a total of \$667 billion of shorter-term Treasury
9 securities by the end of 2012 and use the proceeds to buy longer-
10 term Treasury securities. This will extend the average maturity of
11 the securities in the Federal Reserve's portfolio.

12 ***

13 By reducing the supply of longer-term Treasury securities in the
14 market, this action should put downward pressure on longer-term
15 interest rates, including rates on financial assets that investors
16 consider to be close substitutes for longer-term Treasury securities.
17 The reduction in longer-term interest rates, in turn, will contribute
18 to a broad easing in financial market conditions that will provide
19 additional stimulus to support the economic recovery.²⁸

20 Consequently, two factors are at work: (1) the continued focus on capital
21 preservation on the part of investors has caused them to reallocate capital to the
22 relative safety of Treasury securities, thereby bidding up the price and bidding down
23 the yield; and (2) the Federal Reserve's continued policy of buying long-term
24 Treasury securities in order to lower the yield. As the Federal Reserve noted in its

²⁷ On September 13, 2012, the Federal Reserve announced that, in addition to continuing the maturity extension program announced in June 2011, it would begin buying mortgage-backed securities at a pace of \$40 billion per month. (See, Federal Reserve Press Release, dated September 13, 2012.) At its January 2013 meeting, the Federal Open Market Committee voted to continue its policy of purchasing, on a monthly basis, \$45 billion and \$40 billion of longer-term Treasury securities, and mortgage-backed securities, respectively. During that meeting, various participants expressed concern with potentially adverse consequences of the Federal Reserve's continued accommodative policies. (See, Minutes of the Federal Open Market Committee, January 29-30, 2013, at 13-15.)

²⁸ <http://www.federalreserve.gov/monetarypolicy/maturityextensionprogram.htm>

1 June 2012 Open Market Committee meeting minutes, the effect of those two factors
2 has been a continued decline in Treasury yields:

3 Yields on longer-dated nominal and inflation-protected Treasury
4 securities moved down substantially, on net, over the intermeeting
5 period. The yield on nominal 10-year Treasury securities reached
6 a historically low level immediately following the release of the
7 May employment report. A sizable portion of the decline in
8 longer-term Treasury rates over the period appeared to reflect
9 greater safe-haven demands by investors, along with some increase
10 in market participants' expectations of further Federal Reserve
11 balance sheet actions.²⁹

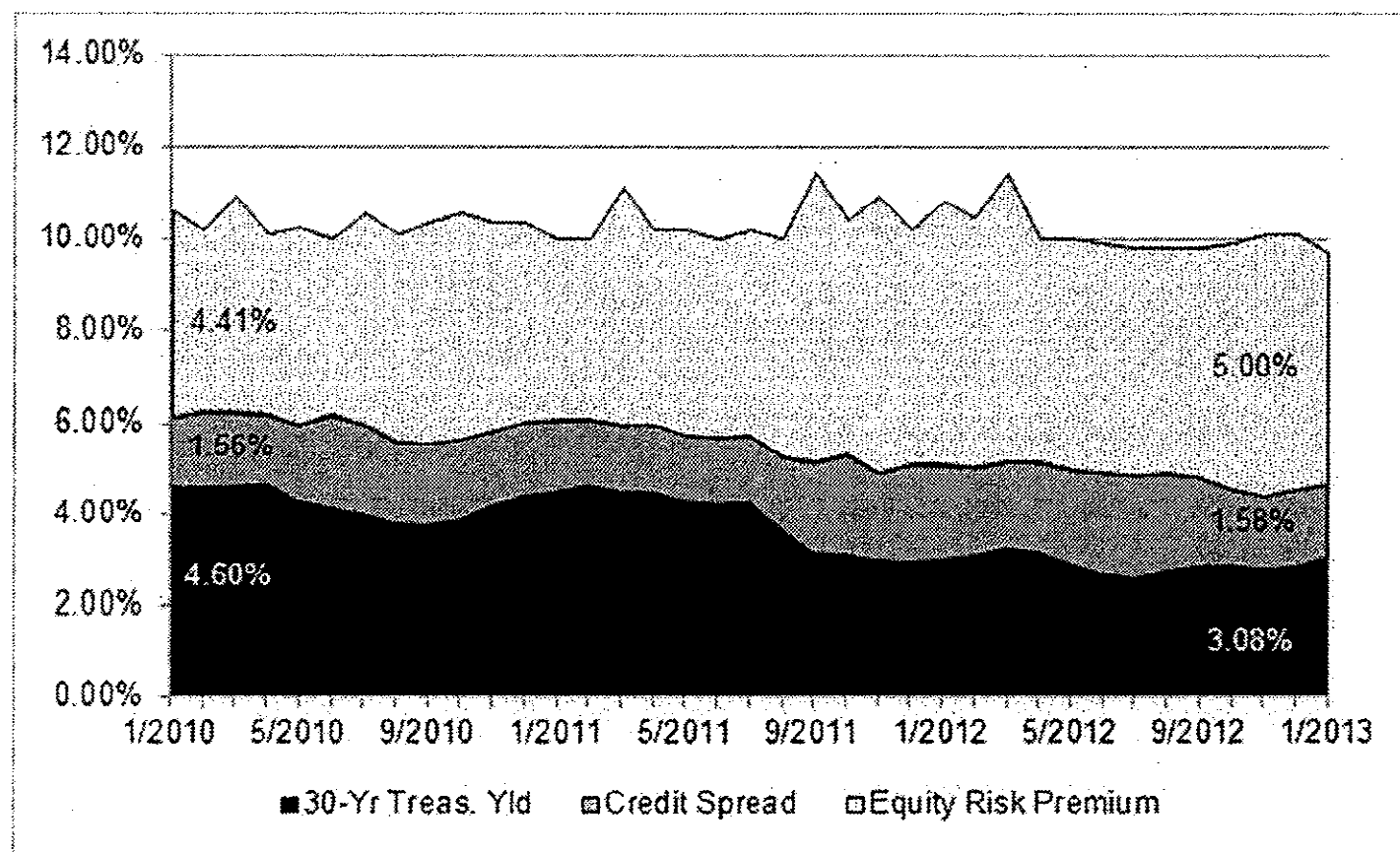
12 At issue, then, is whether those two factors, the continuing tendency of
13 investors to seek the relative safety of long-term Treasury securities and the Federal
14 Reserve's policy of lowering long-term Treasury yields, have caused the required
15 return on equity to fall in a fashion similar to the recent decline in interest rates. In
16 large measure, that issue becomes a question of whether the premium required by
17 debt and equity investors also has remained constant as Treasury yields have
18 decreased. To the extent that the risk premium has increased, the higher premium has
19 offset, at least to some degree, the decline in Treasury yields, indicating that the Cost
20 of Equity has not fallen in lock step with the decline in interest rates.

21 One method of performing that analysis is to analyze recently authorized
22 ROEs for electric utilities on a "build-up" basis. From that perspective, the required
23 market return represents the sum of: (1) long-term Treasury yields; (2) the credit
24 spread (*i.e.*, the incremental return required by debt investors over Treasury yields;
25 and (3) the Equity Risk Premium (*i.e.*, the incremental return required by equity
26 investors over the cost of debt). As shown on Chart 2 (below), that has been the case;

²⁹ Minutes of the Federal Open Market Committee June 19–20, 2012, at 4.

both debt and equity investors have required increased risk premiums as long-term Treasury yields have fallen.

Chart 2: Components of Authorized ROE (2010 – 2013)³⁰



VIII. Capital Structure

Q57. What is the Company's proposed capital structure?

A57. As described in the Direct Testimony of Company Witness Boyle, the Company has proposed a capital structure comprised of 49.22% common equity and 50.78% long-term debt.

Q58. Is there a generally accepted approach to developing the appropriate capital structure for a regulated electric utility?

A58. Yes, there are a number of generally accepted approaches to developing the appropriate capital structure. The reasonableness of the approach depends on the nature and circumstances of the subject company. In cases where the subject

³⁰ Sources: Regulatory Research Associates and Bloomberg Professional.

1 company does not issue its own securities, it may be reasonable to look to the parent's
2 capital structure or to develop a "hypothetical" capital structure based on the proxy
3 group companies or other industry data. Regardless of the approach taken, however,
4 it is important to consider the resulting capital structure in light of industry norms and
5 investor requirements. That is, the capital structure should enable the subject
6 company to maintain its financial integrity, thereby enabling access to capital at
7 competitive rates under a variety of economic and financial market conditions.

8 **Q59. How does the capital structure affect the Cost of Equity?**

9 A59. The capital structure relates to a company's financial risk, which represents
10 the risk that a company may not have adequate cash flows to meet its financial
11 obligations, and is a function of the percentage of debt (or financial leverage) in its
12 capital structure. In that regard, as the percentage of debt in the capital structure
13 increases, so do the fixed obligations for the repayment of that debt. Consequently,
14 as the degree of financial leverage increases, the risk of financial distress (*i.e.*,
15 financial risk) also increases. Since the capital structure can affect the subject
16 company's overall level of risk,³¹ it is an important consideration in establishing a just
17 and reasonable rate of return.

18 **Q60. Please discuss your analysis of the capital structures of the proxy group**
19 **companies.**

20 A60. I calculated the average capital structure for each of the proxy group
21 companies over the last eight quarters. As shown in Schedule (RBH)-8, the mean of
22 the proxy group actual capital structures is 52.05% common equity and 47.95% long-

³¹ See, Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, at 45-46.

1 term debt. The common equity ratios range from 48.30% to 60.00%. Based on that
2 review, it is apparent that the Company's proposed capital structure is generally
3 consistent with the capital structures of the proxy group companies.

4 **Q61. What is the basis for using average capital components rather than a point-in-**
5 **time measurement?**

6 A61. Measuring the capital components at a particular point in time can skew the
7 capital structure by the specific circumstances of a particular period. Therefore, it is
8 more appropriate to normalize the relative relationship between the capital
9 components over a period of time.

10 **Q62. What is your conclusion regarding an appropriate capital structure for**
11 **Delmarva?**

12 A62. Considering the average actual equity ratio of 52.05% for the proxy group
13 companies, I believe that Delmarva's proposed common equity ratio of 49.22% is
14 appropriate as it is consistent with the proxy group companies.

IX. Conclusions and Recommendation

15 **Q63. What is your conclusion regarding the Company's Cost of Equity?**

16 A63. I believe that a rate of return on common equity in the range of 10.25% to
17 11.00% represents the range of equity investors' required rate of return for investment
18 in electric utilities similar to Delmarva in today's capital markets. Within that range,
19 it is my view that an ROE of 10.50% is reasonable and appropriate. Consequently,
20 the Company's proposed 10.25% ROE is at the low end of a reasonable range of
21 estimates of its Cost of Equity.

22 As discussed earlier in my testimony, my recommendation reflects analytical

1 results based on a proxy group of primarily electric utilities. My recommendation
2 also takes into consideration the Company's risk profile relative to the proxy group
3 analytical results with respect to its: (1) relatively small size; and (2) flotation costs
4 associated with equity issuances.

5 Lastly, I conclude that the Company's proposed capital structure, which
6 consists of 49.22% common equity and 50.78% long-term debt, is consistent with
7 industry practice and on that basis, is reasonable and appropriate.

8 **Q64. Does this conclude your Direct Testimony?**

9 A64. Yes, it does.

Robert B. Hevert, CFA
Managing Partner
Sussex Economic Advisors, LLC

Mr. Hevert is an economic and financial consultant with broad experience in regulated industries. He has an extensive background in the areas of corporate finance, corporate strategic planning, energy market assessment, mergers, and acquisitions, asset-based transactions, feasibility and due diligence analyses, and providing expert testimony in litigated proceedings. Mr. Hevert has significant management experience with both operating and professional services companies.

REPRESENTATIVE PROJECT EXPERIENCE

Litigation Support and Expert Testimony

Provided expert testimony and support of litigation in various regulatory proceedings on a variety of energy and economic issues including: cost of capital for ratemaking purposes; the proposed transfer of power purchase agreements; procurement of residual service electric supply; the legal separation of generation assets; merger-related synergies; assessment of economic damages; and specific financing transactions. Services provided include collaborating with counsel, business and technical staff to develop litigation strategies, preparing and reviewing discovery and briefing materials, preparing presentation materials and participating in technical sessions with regulators and intervenors.

Financial and Economic Advisory Services

Retained by numerous leading energy companies and financial institutions throughout North America to provide services relating to the strategic evaluation, acquisition, sale or development of a variety of regulated and non-regulated enterprises. Specific services have included: developing strategic and financial analyses and managing multi-faceted due diligence reviews of proposed corporate M&A counter-parties; developing, screening and recommending potential M&A transactions and facilitating discussions between senior utility executives regarding transaction strategy and structure; performing valuation analyses and financial due diligence reviews of electric generation projects, retail marketing companies, and wholesale trading entities in support of significant M&A transactions.

Specific divestiture-related services have included advising both buy and sell-side clients in transactions for physical and contractual electric generation resources. Sell-side services have included: development and implementation of key aspects of asset divestiture programs such as marketing, offering memorandum development, development of transaction terms and conditions, bid process management, bid evaluation, negotiations, and regulatory approval process. Buy-side services have included comprehensive asset screening, selection, valuation and due diligence reviews. Both buy and sell-side services have included the use of sophisticated asset valuation techniques, and the development and delivery of fairness opinions.

Specific corporate finance experience while a Vice President with Bay State Gas included: negotiation, placement and closing of both private and public long-term debt, preferred and common equity; structured and project financing; corporate cash management; financial analysis, planning and forecasting; and various aspects of investor relations.

Regulatory Analysis and Ratemaking

On behalf of electric, natural gas and combination utilities throughout North America, provided services relating to energy industry restructuring including merchant function exit, residual energy supply obligations, and stranded cost assessment and recovery. Specific services provided include: performing strategic review and development of merchant function exit strategies including analysis of provider of last

resort obligations in both electric and gas markets; and developing value optimizing strategies for physical generation assets.

Energy Market Assessment

Retained by numerous leading energy companies and financial institutions nationwide to manage or provide assessments of regional energy markets throughout the U.S. and Canada. Such assessments have included development of electric and natural gas price forecasts, analysis of generation project entry and exit scenarios, assessment of natural gas and electric transmission infrastructure, market structure and regulatory situation analysis, and assessment of competitive position. Market assessment engagements typically have been used as integral elements of business unit or asset-specific strategic plans or valuation analyses.

Resource Procurement, Contracting and Analysis

Assisted various clients in evaluating alternatives for acquiring fuel and power supplies, including the development and negotiation of energy contracts and tolling agreements. Assignments also have included developing generation resource optimization strategies. Provided advice and analyses of transition service power supply contracts in the context of both physical and contractual generation resource divestiture transactions.

Business Strategy and Operations

Retained by numerous leading North American energy companies and financial institutions nationwide to provide services relating to the development of strategic plans and planning processes for both regulated and non-regulated enterprises. Specific services provided include: developing and implementing electric generation strategies and business process redesign initiatives; developing market entry strategies for retail and wholesale businesses including assessment of asset-based marketing and trading strategies; and facilitating executive level strategic planning retreats. As Vice President, of Bay State was responsible for the company's strategic planning and business development processes, played an integral role in developing the company's non-regulated marketing affiliate, EnergyUSA, and managed the company's non-regulated investments, partnerships and strategic alliances.

PROFESSIONAL HISTORY

Sussex Economic Advisors, LLC (2012 – Present)
Managing Partner

Concentric Energy Advisors, Inc. (2002 – 2012)
President

Navigant Consulting, Inc. (1997 – 2001)
Managing Director (2000 – 2001)
Director (1998 – 2000)
Vice President, REED Consulting Group (1997 – 1998)

Bay State Gas Company (now Columbia Gas Company of Massachusetts) (1987 – 1997)
Vice President and Assistant Treasurer

Boston College (1986 – 1987)
Financial Analyst

General Telephone Company of the South (1984 – 1986)
Revenue Requirements Analyst

EDUCATION

M.B.A., University of Massachusetts at Amherst, 1984
B.S., University of Delaware, 1982

DESIGNATIONS AND PROFESSIONAL AFFILIATIONS

Chartered Financial Analyst, 1991
Association for Investment Management and Research
Boston Security Analyst Society

PUBLICATIONS/PRESENTATIONS

Has made numerous presentations throughout the United States and Canada on several topics, including:

- Generation Asset Valuation and the Use of Real Options
 - Retail and Wholesale Market Entry Strategies
 - The Use Strategic Alliances in Restructured Energy Markets
 - Gas Supply and Pipeline Infrastructure in the Northeast Energy Markets
 - Nuclear Asset Valuation and the Divestiture Process
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AVAILABLE UPON REQUEST

Extensive client and project listings, and specific references.

DELMARVA (Hevert)
Attachment A

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Arizona Corporation Commission				
Southwest Gas Corporation	11/10	Southwest Gas Corporation	Docket No. G-01551A-10-0458	Return on Equity
Arkansas Public Service Commission				
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	01/07	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 06-161-U	Return on Equity
California Public Utilities Commission				
Southwest Gas Corporation	09/12	Southwest Gas Corporation	Docket No. A-12-12-024	Return on Equity
Colorado Public Utilities Commission				
Xcel Energy, Inc.	12/12	Public Service Company of Colorado	Docket No. 12AL-1268G	Return on Equity (gas)
Xcel Energy, Inc.	11/11	Public Service Company of Colorado	Docket No. 11AL-947E	Return on Equity (electric)
Xcel Energy, Inc.	12/10	Public Service Company of Colorado	Docket No. 10AL-963G	Return on Equity (electric)
Atmos Energy Corporation	07/09	Atmos Energy Colorado-Kansas Division	Docket No. 09AL-507G	Return on Equity (gas)
Xcel Energy, Inc.	12/06	Public Service Company of Colorado	Docket No. 06S-656G	Return on Equity (gas)
Xcel Energy, Inc.	04/06	Public Service Company of Colorado	Docket No. 06S-234EG	Return on Equity (electric)
Xcel Energy, Inc.	08/05	Public Service Company of Colorado	Docket No. 05S-369ST	Return on Equity (steam)
Xcel Energy, Inc.	05/05	Public Service Company of Colorado	Docket No. 05S-246G	Return on Equity (gas)
Connecticut Department of Public Utility Control				
Southern Connecticut Gas Company	09/08	Southern Connecticut Gas Company	Docket No. 08-08-17	Return on Equity

DELMARVA (Hevert)
Attachment A

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Southern Connecticut Gas Company	12/07	Southern Connecticut Gas Company	Docket No. 05-03-17PH02	Return on Equity
Connecticut Natural Gas Corporation	12/07	Connecticut Natural Gas Corporation	Docket No. 06-03-04PH02	Return on Equity
Delaware Public Service Commission				
Delmarva Power & Light Company	12/12	Delmarva Power & Light Company	Case No. 12-546	Return on Equity
Delmarva Power & Light Company	12/11	Delmarva Power & Light Company	Case No. 11-528	Return on Equity
District of Columbia Public Service Commission				
Potomac Electric Power Company	07/11	Potomac Electric Power Company	Formal Case No. FC1087	Return on Equity
Federal Energy Regulatory Commission				
Public Service Company of New Mexico	10/10	Public Service Company of New Mexico	Docket No. ER11-1915-000	Return on Equity
Portland Natural Gas Transmission System	05/10	Portland Natural Gas Transmission System	Docket No. RP10-729-000	Return on Equity
Florida Gas Transmission Company, LLC	10/09	Florida Gas Transmission Company, LLC	Docket No. RP10-21-000	Return on Equity
Maritimes and Northeast Pipeline, LLC	07/09	Maritimes and Northeast Pipeline, LLC	Docket No. RP09-809-000	Return on Equity
Spectra Energy	02/08	Saltville Gas Storage	Docket No. RP08-257-000	Return on Equity
Panhandle Energy Pipelines	08/07	Panhandle Energy Pipelines	Docket No. PL07-2-000	Response to draft policy statement regarding inclusion of MLPs in proxy groups for determination of gas pipeline ROEs
Southwest Gas Storage Company	08/07	Southwest Gas Storage Company	Docket No. RP07-541-000	Return on Equity

DELMARVA (Hevert)
Attachment A

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Southwest Gas Storage Company	06/07	Southwest Gas Storage Company	Docket No. RP07-34-000	Return on Equity
Sea Robin Pipeline LLC	06/07	Sea Robin Pipeline LLC	Docket No. RP07-513-000	Return on Equity
Transwestern Pipeline Company	09/06	Transwestern Pipeline Company	Docket No. RP06-614-000	Return on Equity
GPU International and Aquila	11/00	GPU International	Docket No. EC01-24-000	Market Power Study
Georgia Public Service Commission				
Atlanta Gas Light Company	05/10	Atlanta Gas Light Company	Docket No. 31647-U	Return on Equity
Hawaiian Public Utilities Commission				
Hawaiian Electric Light Company	08/12	Hawaiian Electric Light Company	Docket No. 2012-0099	Return on Equity
Illinois Commerce Commission				
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0279	Return on Equity (electric)
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0282	Return on Equity (gas)
Indiana Utility Regulatory Commission				
Northern Indiana Public Service Company	05/09	Northern Indiana Public Service Company	Cause No. 43894	
Maine Public Utilities Commission				
Central Maine Power Company	06/11	Central Maine Power Company	Docket No. 2010-327	Response to Bench Analysis provided by Commission Staff relating to the Company's credit and collections processes
Maryland Public Service Commission				
Potomac Electric Power Company	11/12	Potomac Electric Power Company	Case No. 9311	Return on Equity
Potomac Electric Power Company	12/11	Potomac Electric Power Company	Case No. 9286	Return on Equity
Delmarva Power & Light Company	12/11	Delmarva Power & Light Company	Case No. 9285	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Delmarva Power & Light Company	12/10	Delmarva Power & Light Company	Case No. 9249	Return on Equity
Massachusetts Department of Public Utilities				
Bay State Gas Company d/b/a Columbia Gas of Massachusetts	04/12	Bay State Gas Company d/b/a Columbia Gas of Massachusetts	DPU 12-25	Capital Cost Recovery
National Grid	08/09	Massachusetts Electric Company d/b/a National Grid	DPU 09-39	Revenue Decoupling and Return on Equity
National Grid	08/09	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 09-38	Return on Equity – Solar Generation
Bay State Gas Company	04/09	Bay State Gas Company	DPU 09-30	Return on Equity
NSTAR Electric	09/04	NSTAR Electric	DTE 04-85	Divestiture of Power Purchase Agreement
NSTAR Electric	08/04	NSTAR Electric	DTE 04-78	Divestiture of Power Purchase Agreement
NSTAR Electric	07/04	NSTAR Electric	DTE 04-68	Divestiture of Power Purchase Agreement
NSTAR Electric	07/04	NSTAR Electric	DTE 04-61	Divestiture of Power Purchase Agreement
NSTAR Electric	06/04	NSTAR Electric	DTE 04-60	Divestiture of Power Purchase Agreement
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Bay State Gas Company	01/93	Bay State Gas Company	DPU 93-14	Divestiture of Shelf Registration
Bay State Gas Company	01/91	Bay State Gas Company	DPU 91-25	Divestiture of Shelf Registration

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SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Minnesota Public Utilities Commission				
Xcel Energy, Inc.	11/12	Northern States Power Company	Docket No. E002/GR-12-961	Return on Equity
Otter Tail Power Corporation	04/10	Otter Tail Power Company	Docket No. E-017/GR-10-239	Return on Equity
Minnesota Power a division of ALLETE, Inc.	11/09	Minnesota Power	Docket No. E-015/GR-09-1151	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	11/08	CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-08-1075	Return on Equity
Otter Tail Power Corporation	10/07	Otter Tail Power Company	Docket No. E-017/GR-07-1178	Return on Equity
Xcel Energy, Inc.	11/05	NSP-Minnesota	Docket No. E-002/GR-05-1428	Return on Equity (electric)
Xcel Energy, Inc.	09/04	NSP Minnesota	Docket No. G-002/GR-04-1511	Return on Equity (gas)
Mississippi Public Service Commission				
CenterPoint Energy Resources, Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Mississippi Gas	07/09	CenterPoint Energy Mississippi Gas	Docket No. 09-UN-334	Return on Equity
Missouri Public Service Commission				
Laclede Gas Company	12/12	Laclede Gas Company	Case No. GR-2013-0171	Return on Equity
Union Electric Company d/b/a Ameren Missouri	02/12	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2012-0166	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	09/10	Union Electric Company d/b/a AmerenUE	Case No. ER-2011-0028	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	06/10	Union Electric Company d/b/a AmerenUE	Case No. GR-2010-0363	Return on Equity (gas)

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SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Montana Public Service Commission				
Northwestern Corporation	09/12	Northwestern Corporation	Docket No. D2012.9.94	Return on Equity (gas)
Nevada Public Utilities Commission				
Southwest Gas Corporation	04/12	Southwest Gas Corporation	Docket No. 12-04005	Return on Equity (gas)
Nevada Power Company	06/11	Nevada Power Company	Docket No. 11-06006	Return on Equity (electric)
New Hampshire Public Utilities Commission				
EnergyNorth Natural Gas d/b/a National Grid NH	02/10	EnergyNorth Natural Gas d/b/a National Grid NH	Docket No. DG 10-017	Return on Equity
Unitil Energy Systems, Inc. ("Unitil"), EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	08/08	Unitil Energy Systems, Inc. ("Unitil"), EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	Docket No. DG 07-072	Carrying Charge Rate on Cash Working Capital
New Jersey Board of Public Utilities				
Atlantic City Electric Company	08/11	Atlantic City Electric Company	Docket No. ER11080469	Return on Equity
Pepco Holdings, Inc.	09/06	Atlantic City Electric Company	Docket No. EM06090638	Divestiture and Valuation of Electric Generating Assets
Pepco Holdings, Inc.	12/05	Atlantic City Electric Company	Docket No. EM05121058	Market Value of Electric Generation Assets; Auction
Conectiv	06/03	Atlantic City Electric Company	Docket No. EO03020091	Market Value of Electric Generation Assets; Auction Process
New Mexico Public Regulation Commission				
Southwestern Public Service Company	02/11	Southwestern Public Service Company	Case No. 10-00395-UT	Return on Equity (electric)

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SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Public Service Company of New Mexico	06/10	Public Service Company of New Mexico	Case No. 10-00086-UT	Return on Equity (electric)
Public Service Company of New Mexico	09/08	Public Service Company of New Mexico	Case No. 08-00273-UT	Return on Equity (electric)
Xcel Energy, Inc.	07/07	Southwestern Public Service Company	Case No. 07-00319-UT	Return on Equity (electric)
New York State Public Service Commission				
Consolidated Edison Company of New York, Inc.	01/13	Consolidated Edison Company of New York, Inc.	Case No. 13-E-0030	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Electric Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Electric Service	Case No. 12-E-0201	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Gas Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Gas Service	Case No. 12-G-0202	Return on Equity (gas)
Orange and Rockland Utilities, Inc.	07/11	Orange and Rockland Utilities, Inc.	Case No. 11-E-0408	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	07/10	Orange and Rockland Utilities, Inc.	Case No. 10-E-0362	Return on Equity (electric)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-G-0795	Return on Equity (gas)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-S-0794	Return on Equity (steam)
Niagara Mohawk Power Corporation	07/01	Niagara Mohawk Power Corporation	Case No. 01-E-1046	Power Purchase and Sale Agreement; Standard Offer Service Agreement
North Carolina Utilities Commission				
Duke Energy Carolinas, LLC	02/13	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1026	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	10/12	Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	Docket No. E-2, Sub 1023	Return on Equity
Dominion North Carolina Power	03/12	Dominion Resources	Docket No. E-22, Sub 479	Return on Equity (electric)
Duke Energy Carolinas, LLC	07/11	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 989	Return on Equity (electric)
North Dakota Public Service Commission				
Otter Tail Power Company	11/08	Otter Tail Power Company	Docket No. 08-862	Return on Equity (electric)
Oklahoma Corporation Commission				
Oklahoma Gas & Electric Company	07/11	Oklahoma Gas & Electric Company	Cause No. PUD201100087	Return on Equity
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/09	CenterPoint Energy Oklahoma Gas	Cause No. PUD200900055	Return on Equity
Rhode Island Public Utilities Commission				
The Narragansett Electric Company d/b/a National Grid	04/12	The Narragansett Electric Company d/b/a National Grid	Docket No. 4323	Return on Equity (electric & gas)
National Grid RI – Gas	08/08	National Grid RI – Gas	Docket No. 3943	Revenue Decoupling and Return on Equity
South Carolina Public Service Commission				
South Carolina Electric & Gas	10/12	South Carolina Electric & Gas	Docket No. 2012-218-E	Return on Equity
Duke Energy Carolinas, LLC	08/11	Duke Energy Carolinas, LLC	Docket No. 2011-271-E	Return on Equity
South Carolina Electric & Gas	03/10	South Carolina Electric & Gas	Docket No. 2009-489-E	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
South Dakota Public Utilities Commission				
Otter Tail Power Company	08/10	Otter Tail Power Company	Docket No. EL10-011	Return on Equity (electric)
Northern States Power Company	06/09	South Dakota Division of Northern States Power	Docket No. EL09-009	Return on Equity (electric)
Otter Tail Power Company	10/08	Otter Tail Power Company	Docket No. EL08-030	Return on Equity (electric)
Texas Public Utility Commission				
Wind Energy Texas Transmission, LLC	08/12	Wind Energy Texas Transmission, LLC	Docket No. 40606	Return on Equity
Southwestern Electric Power Company	07/12	Southwestern Electric Power Company	Docket No. 40443	Return on Equity
Oncor Electric Delivery Company, LLC	01/11	Oncor Electric Delivery Company, LLC	Docket No. 38929	Return on Equity
Texas-New Mexico Power Company	08/10	Texas-New Mexico Power Company	Docket No. 38480	Return on Equity (electric)
CenterPoint Energy Houston Electric LLC	06/10	CenterPoint Energy Houston Electric LLC	Docket No. 38339	Return on Equity
Xcel Energy, Inc.	05/10	Southwestern Public Service Company	Docket No. 38147	Return on Equity (electric)
Texas-New Mexico Power Company	08/08	Texas-New Mexico Power Company	Docket No. 36025	Return on Equity (electric)
Xcel Energy, Inc.	05/06	Southwestern Public Service Company	Docket No. 32766	Return on Equity (electric)
Texas Railroad Commission				
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/12	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10182	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Atmos Energy Corporation – West Texas Division	06/12	Atmos Energy Corporation – West Texas Division	GUD 10175	Return on Equity
Atmos Energy Corporation – Mid-Texas Division	06/12	Atmos Energy Corporation – Mid-Texas Division	GUD 10171	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	12/10	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10038	Return on Equity
Atmos Pipeline - Texas	09/10	Atmos Pipeline - Texas	GUD 10000	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/09	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 9902	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	03/08	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	GUD 9791	Return on Equity
Utah Public Service Commission				
Questar Gas Company	12/07	Questar Gas Company	Docket No. 07-057-13	Return on Equity
Vermont Public Service Board				
Central Vermont Public Service Corporation; Green Mountain Power	02/12	Central Vermont Public Service Corporation; Green Mountain Power	Docket No. 7770	Merger Policy
Central Vermont Public Service Corporation	12/10	Central Vermont Public Service Corporation	Docket No. 7627	Return on Equity (electric)
Green Mountain Power	04/06	Green Mountain Power	Docket Nos. 7175 and 7176	Return on Equity (electric)
Vermont Gas Systems, Inc.	12/05	Vermont Gas Systems	Docket Nos. 7109 and 7160	Return on Equity (gas)

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SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Virginia State Corporation Commission				
Columbia Gas Of Virginia, Inc.	06/06	Columbia Gas Of Virginia, Inc.	Case No. PUE-2005-00098	Merger Synergies
Dominion Resources	10/01	Virginia Electric and Power Company	Case No. PUE000584	Corporate Structure and Electric Generation Strategy
Virginia Natural Gas, Inc.	02/11	Virginia Natural Gas, Inc.	Case No. PUE-2010-0014	Capital Structure

Constant Growth Discounted Cash Flow Model
30 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
American Electric Power Company, Inc.	AEP	\$1.88	\$44.20	4.25%	4.32%	3.38%	3.47%	3.00%	3.28%	7.32%	7.61%	7.80%
Cleco Corp.	CNL	\$1.35	\$42.22	3.20%	3.27%	3.00%	3.00%	8.00%	4.67%	6.25%	7.94%	11.33%
Empire District Electric	EDE	\$1.00	\$21.10	4.74%	4.93%	N/A	10.20%	5.50%	7.85%	10.37%	12.78%	15.18%
Great Plains Energy Inc.	GXP	\$0.87	\$21.19	4.11%	4.24%	7.10%	7.20%	5.50%	6.60%	9.72%	10.84%	11.45%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$26.54	4.67%	4.84%	6.35%	6.70%	9.00%	7.35%	11.17%	12.19%	13.88%
IDACORP, Inc.	IDA	\$1.52	\$45.18	3.36%	3.42%	4.00%	4.00%	2.00%	3.33%	5.40%	6.75%	7.43%
Offet Tail Corporation	OTTR	\$1.19	\$26.63	4.47%	4.59%	6.00%	5.00%	N/A	5.50%	9.58%	10.09%	10.60%
Pinnacle West Capital Corp.	PNW	\$2.18	\$53.04	4.11%	4.25%	6.90%	7.50%	6.50%	6.97%	10.74%	11.22%	11.76%
PNM Resources, Inc.	PNM	\$0.58	\$20.93	2.77%	2.93%	8.35%	9.30%	16.00%	11.22%	11.24%	14.14%	18.99%
Portland General Electric Company	POR	\$1.08	\$28.30	3.82%	3.89%	4.07%	1.99%	5.50%	3.85%	5.84%	7.74%	9.42%
Southern Company	SO	\$1.96	\$43.77	4.48%	4.59%	4.98%	4.86%	5.00%	4.95%	9.45%	9.54%	9.59%
Westar Energy, Inc.	WR	\$1.32	\$29.92	4.41%	4.57%	6.38%	7.50%	7.50%	7.13%	10.93%	11.70%	12.08%
PROXY GROUP MEAN				4.03%	4.15%	5.50%	5.89%	6.68%	6.06%	9.00%	10.21%	11.63%
PROXY GROUP MEDIAN				4.18%	4.29%	6.00%	5.85%	5.50%	6.05%	9.65%	10.47%	11.39%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 30-trading day average as of February 15, 2013
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model
90 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
American Electric Power Company, Inc.	AEP	\$1.88	\$43.47	4.32%	4.40%	3.38%	3.47%	3.00%	3.28%	7.39%	7.68%	7.87%
Cleco Corp.	CNL	\$1.35	\$41.30	3.27%	3.34%	3.00%	3.00%	8.00%	4.67%	6.32%	8.01%	11.40%
Empire District Electric	EDE	\$1.00	\$20.84	4.80%	4.99%	N/A	10.20%	5.50%	7.85%	10.43%	12.84%	15.24%
Great Plains Energy Inc.	GXP	\$0.87	\$21.10	4.12%	4.26%	7.10%	7.20%	5.50%	6.60%	9.74%	10.86%	11.47%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$25.77	4.81%	4.99%	6.35%	6.70%	9.00%	7.35%	11.31%	12.34%	14.03%
IDACORP, Inc.	IDA	\$1.52	\$43.89	3.46%	3.52%	4.00%	4.00%	2.00%	3.33%	5.50%	6.85%	7.53%
Otter Tail Corporation	OTTR	\$1.19	\$25.04	4.75%	4.88%	6.00%	5.00%	N/A	5.50%	9.87%	10.38%	10.89%
Pinnacle West Capital Corp.	PNW	\$2.18	\$52.06	4.19%	4.33%	6.90%	7.50%	6.50%	6.97%	10.82%	11.30%	11.84%
PNM Resources, Inc.	PNM	\$0.58	\$21.07	2.75%	2.91%	8.35%	9.30%	16.00%	11.22%	11.22%	14.12%	18.97%
Portland General Electric Company	POR	\$1.08	\$27.40	3.94%	4.02%	4.07%	1.99%	5.50%	3.85%	5.97%	7.87%	9.55%
Southern Company	SO	\$1.96	\$43.99	4.46%	4.57%	4.98%	4.86%	5.00%	4.95%	9.42%	9.51%	9.57%
Westar Energy, Inc.	WR	\$1.32	\$29.22	4.52%	4.68%	6.38%	7.50%	7.50%	7.13%	11.04%	11.81%	12.19%
PROXY GROUP MEAN				4.12%	4.24%	5.50%	5.89%	6.68%	6.06%	9.09%	10.30%	11.71%
PROXY GROUP MEDIAN				4.26%	4.36%	6.00%	5.85%	5.50%	6.05%	9.80%	10.62%	11.44%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 90-trading day average as of February 15, 2013
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model
180 Day Average Stock Price

Company	Ticker	Annualized Dividend	Average		Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line		Average Earnings Growth	Low ROE	Mean ROE	High ROE
			Stock Price	Dividend Yield				Earnings Growth	Earnings Growth				
American Electric Power Company, Inc.	AEP	\$1.88	\$42.69	4.40%	4.48%	3.38%	3.47%	3.00%	3.28%	3.28%	7.47%	7.76%	7.95%
Cleco Corp.	CNL	\$1.35	\$41.68	3.24%	3.31%	3.00%	3.00%	8.00%	4.67%	4.67%	6.29%	7.98%	11.37%
Empire District Electric	EDE	\$1.00	\$21.05	4.75%	4.94%	N/A	10.20%	5.50%	7.85%	7.85%	10.38%	12.79%	15.19%
Great Plains Energy Inc.	GXP	\$0.87	\$21.36	4.07%	4.21%	7.10%	7.20%	5.50%	6.60%	6.60%	9.68%	10.81%	11.42%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$26.77	4.63%	4.80%	6.35%	6.70%	9.00%	7.35%	7.35%	11.13%	12.15%	13.84%
IDACORP, Inc.	IDA	\$1.52	\$42.96	3.54%	3.60%	4.00%	4.00%	2.00%	3.33%	3.33%	5.57%	6.93%	7.61%
Otter Tail Corporation	OTTR	\$1.19	\$24.05	4.95%	5.08%	6.00%	5.00%	N/A	5.50%	5.50%	10.07%	10.58%	11.10%
Pinnacle West Capital Corp.	PNW	\$2.18	\$52.17	4.18%	4.32%	6.90%	7.50%	6.50%	6.97%	6.97%	10.81%	11.29%	11.84%
PNM Resources, Inc.	PNM	\$0.58	\$20.61	2.81%	2.97%	8.35%	9.30%	16.00%	11.22%	11.22%	11.28%	14.19%	19.04%
Portland General Electric Company	POR	\$1.08	\$27.16	3.98%	4.05%	4.07%	1.99%	5.50%	3.85%	3.85%	6.01%	7.91%	9.59%
Southern Company	SO	\$1.96	\$45.26	4.33%	4.44%	4.98%	4.86%	5.00%	4.95%	4.95%	9.30%	9.38%	9.44%
Westar Energy, Inc.	WR	\$1.32	\$29.49	4.48%	4.64%	6.38%	7.50%	7.50%	7.13%	7.13%	11.00%	11.76%	12.14%
PROXY GROUP MEAN				4.11%	4.24%	5.50%	5.89%	6.68%	6.06%	6.06%	9.08%	10.29%	11.71%
PROXY GROUP MEDIAN				4.25%	4.38%	6.00%	5.85%	5.50%	6.05%	6.05%	9.88%	10.70%	11.39%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 180-trading day average as of February 15, 2013
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Sharpe Ratio Derived *Ex-Ante* Market Risk Premium

[1]	[2]	[3]	[4]	[5]
RP_h	Vol_h	VOL_e	Historical Sharpe Ratio	RP_e
6.60%	20.30%	18.54%	32.52%	6.03%

	[6]	[7]	[8]	[9]
Date	VXV	Jul 13 VIX Futures	Aug 13 VIX Futures	Sep 13 VIX Futures
2/15/2013	14.26	17.75	18.40	19.05
2/14/2013	14.43	17.70	18.35	18.90
2/13/2013	14.63	17.65	18.20	18.90
2/12/2013	14.53	17.70	18.40	18.95
2/11/2013	14.68	17.80	18.45	19.00
2/8/2013	14.80	18.00	18.60	19.20
2/7/2013	15.19	18.25	18.90	19.45
2/6/2013	15.14	18.30	18.95	19.50
2/5/2013	15.30	18.50	19.05	19.60
2/4/2013	15.79	18.55	19.15	19.70
2/1/2013	14.79	18.45	19.00	19.50
1/31/2013	15.55	18.50	19.05	19.55
1/30/2013	15.42	18.40	18.95	19.50
1/29/2013	14.74	18.05	18.70	19.25
1/28/2013	15.07	18.20	18.75	19.35
1/25/2013	14.66	18.10	18.75	19.30
1/24/2013	14.67	18.20	18.85	19.45
1/23/2013	14.50	18.25	18.90	19.50
1/22/2013	14.72	18.55	19.20	19.80
1/18/2013	15.29	19.15	19.80	20.45
1/17/2013	16.08	19.80	20.45	21.05
1/16/2013	16.24	20.10	20.75	21.35
1/15/2013	16.33	20.30	20.80	21.35
1/14/2013	16.29	20.30	20.85	21.40
1/11/2013	16.01	20.50	21.00	21.60
1/10/2013	16.12	20.60	21.15	21.75
1/9/2013	16.50	20.90	21.50	22.15
1/8/2013	16.45	21.15	21.75	22.35
1/7/2013	16.45	21.20	21.75	22.35
1/4/2013	16.34	21.15	21.75	22.30
Average:	18.54			

Notes:

[1] Source: Morningstar, Inc.

 RP_h = historical arithmetic average Risk Premium

[2] Source: Morningstar, Inc.

 Vol_h = historical market volatility[3] Vol_e = expected market volatility (average of Cols. [6] to [9])

[4] Equals [1] / [2]

[5] Equals [3] x [4]

[6] Source: Bloomberg Professional

[7] Source: Bloomberg Professional

[8] Source: Bloomberg Professional

[9] Source: Bloomberg Professional

Ex-Ante Market Risk Premium
Market DCF Method Based - Bloomberg

[1]	[2]	[3]
S&P 500 Est. Required Market Return	Current 30-Year Treasury (30-day average)	Implied Market Risk Premium
13.00%	3.12%	9.88%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional

[3] Equals [1] - [2]

Ex-Ante Market Risk Premium
Market DCF Method Based - Capital IQ

[1]	[2]	[3]
S&P 500 Est. Required Market Return	Current 30-Year Treasury (30-day average)	Implied Market Risk Premium
12.93%	3.12%	9.81%

Notes:

[1] Source: Capital IQ

[2] Source: Bloomberg Professional

[3] Equals [1] - [2]

Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1]	[2]
		Bloomberg	Value Line
American Electric Power Company, Inc.	AEP	0.627	0.65
Cleco Corp.	CNL	0.770	0.65
Empire District Electric	EDE	0.759	0.65
Great Plains Energy Inc.	GXP	0.767	0.75
Hawaiian Electric Industries, Inc.	HE	0.735	0.70
IDACORP, Inc.	IDA	0.806	0.70
Otter Tail Corporation	OTTR	0.766	0.90
Pinnacle West Capital Corp.	PNW	0.715	0.70
PNM Resources, Inc.	PNM	0.680	0.90
Portland General Electric Company	POR	0.748	0.75
Southern Company	SO	0.523	0.55
Westar Energy, Inc.	WR	0.695	0.70
Mean		0.716	0.72

Notes:

[1] Source: Bloomberg Professional

[2] Source: Value Line

Capital Asset Pricing Model Results
Sharpe Ratio, Bloomberg, and Capital IQ Derived Market Risk Premium

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
		Ex-Ante Market Risk Premium			CAPM Results		
Risk-Free Rate	Average	Sharpe	Bloomberg	Capital IQ	Sharpe	Bloomberg	Capital IQ
	Beta	Ratio	Market DCF	Market DCF	Ratio	Market DCF	Market
	Coefficient	Derived	Derived	Derived	Derived	Derived	DCF
PROXY GROUP BLOOMBERG BETA COEFFICIENT							
Current 30-Year Treasury (30-day average) [9]	3.12%	0.716	6.03%	9.88%	9.81%	7.43%	10.19%
Near-Term Projected 30-Year Treasury [10]	3.25%	0.716	6.03%	9.88%	9.81%	7.57%	10.32%
Mean						7.50%	10.26%
							10.21%

Ex-Ante Market Risk Premium					CAPM Results			
Average		Sharpe	Bloomberg	Capital IQ	Sharpe	Bloomberg	Capital IQ	
Risk-Free	Beta	Ratio	Market DCF	Market DCF	Ratio	Market DCF	Market DCF	
Rate	Coefficient	Derived	Derived	Derived	Derived	Derived	DCF	
PROXY GROUP VALUE LINE AVERAGE BETA COEFFICIENT								
Current 30-Year Treasury (30-day average) [9]	3.12%	0.717	6.03%	9.88%	9.81%	7.44%	10.20%	
Near-Term Projected 30-Year Treasury [10]	3.25%	0.717	6.03%	9.88%	9.81%	7.57%	10.33%	
Mean						7.50%	10.27%	
							10.22%	

Notes:

- [1] See Notes [9] and [10]
 [2] Source: Schedule (RBH)-3
 [3] Source: Schedule (RBH)-2
 [4] Source: Schedule (RBH)-2
 [5] Source: Schedule (RBH)-2
 [6] Equals Col. [1] + (Col. [2] x Col. [3])
 [7] Equals Col. [1] + (Col. [2] x Col. [4])
 [8] Equals Col. [1] + (Col. [2] x Col. [5])
 [9] Source: Bloomberg Professional
 [10] Source: Blue Chip Financial Forecasts, Vol. 32, No. 2, February 1, 2013, at 2

Bond Yield Plus Risk Premium

	[1]	[2]	[3]	[4]	[5]
	Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
Current	-3.08%	-2.94%	3.12%	7.11%	10.23%
Near Term Projected	-3.08%	-2.94%	3.25%	6.99%	10.24%
Long-Term Projected	-3.08%	-2.94%	5.10%	5.66%	10.76%

Notes:

[1] Constant of regression equation

[2] Slope of regression equation

[3] Source: Current = Bloomberg Professional,

Near Term Projected = Blue Chip Financial Forecasts, Vol. 32, No. 2, February 1, 2013, at 2,

Long Term Projected = Blue Chip Financial Forecasts, Vol. 31, No. 12, December 1, 2012, at 14

[4] Equals [1] + [2] x ln([3])

[5] Equals [3] + [4]

Small Size Premium

	[1]	[2]
	Customers (Mil)	(\$Bil)
Delmarva Power & Light Company Equity	0.30	\$0.37
Median Market to Book for Comp Group		1.35
Delmarva Power Implied Market Capitalization		\$0.50

		[3]	[4]	[5]
Company Name	Ticker	Customers (Mil)	Market Cap (\$Bil)	Market to Book Ratio
American Electric Power Company, Inc.	AEP	4.3	\$21.45	1.41
Cleco Corp.	CNL	0.3	\$2.56	1.71
Empire District Electric	EDE	0.2	\$0.89	1.22
Great Plains Energy Inc.	GXP	0.8	\$3.25	0.97
Hawaiian Electric Industries, Inc.	HE	0.4	\$2.59	1.63
IDACORP, Inc.	IDA	0.5	\$2.27	1.24
Otter Tail Corporation	OTTR	0.1	\$0.96	1.70
Pinnacle West Capital Corp.	PNW	1.1	\$5.82	1.40
PNM Resources, Inc.	PNM	0.7	\$1.67	1.02
Portland General Electric Company	POR	0.8	\$2.14	1.20
Southern Company	SO	4.4	\$38.26	2.02
Westar Energy, Inc.	WR	0.7	\$3.78	1.31
MEDIAN		0.7	\$2.58	1.35
MEAN		1.2	\$7.14	1.40

Market Capitalization (\$Mil) [6]				
Decile	Low	High	Size Premium	
2	\$ 7,747.951	\$ 17,541.302	0.76%	
3	\$ 4,250.360	\$ 7,686.611	0.92%	
4	\$ 2,772.831	\$ 4,227.668	1.14%	
5	\$ 1,912.240	\$ 2,759.391	1.70%	
6	\$ 1,346.619	\$ 1,909.051	1.72%	
7	\$ 822.077	\$ 1,346.528	1.73%	
8	\$ 514.459	\$ 818.065	2.46%	
9	\$ 254.604	\$ 514.209	2.70%	
10	\$ 1.139	\$ 253.761	6.03%	

Notes:

[1] SEC Form 10-K for the fiscal year ended December 31, 2012, at 8

[2] Application for Increase in Rates

[3] Source: SNL Financial

[4] Source: Bloomberg, 30-day average

[5] Source: Bloomberg, 30-day average

[6] Source: Ibbotson Associates, 2013 Ibbotson SBBI Risk Premia Over Time Report

Flotation Cost Adjustment

Two most recent open market common stock issuances per company, if available

Company	Date	Shares Issued	Offering Price	Underwriting Discount [i]	Offering Expense	Net Proceeds Per Share	Total Flotation Costs	Gross Equity Issue Before Costs	Net Proceeds	Flotation Cost Percentage
Pepco Holdings, Inc.	3/5/2012	17,922,077	\$19.25	\$0.6738	\$500,000	\$18.55	\$12,574,999	\$344,999,982	\$332,424,983	3.645%
Pepco Holdings, Inc.	11/5/2008	16,100,000	\$16.50	\$0.6188	\$200,000	\$15.87	\$10,161,875	\$265,650,000	\$255,488,125	3.825%
American Electric Power Company, Inc.	4/1/2009	69,000,000	\$24.50	\$0.7350	\$400,000	\$23.76	\$51,115,000	\$1,690,500,000	\$1,639,385,000	3.024%
American Electric Power Company, Inc.	2/27/2003	57,500,000	\$20.95	\$0.6285	\$550,000	\$20.31	\$36,688,750	\$1,204,625,000	\$1,167,936,250	3.046%
Cleco Corp.	8/14/2006	6,900,000	\$23.75	\$0.8900	\$225,000	\$22.83	\$6,366,000	\$163,875,000	\$157,509,000	3.885%
Cleco Corp.	11/9/2004	2,000,000	\$18.50	\$0.6475	\$200,000	\$17.75	\$1,495,000	\$37,000,000	\$35,505,000	4.041%
Empire District Electric	12/6/2007	3,450,000	\$23.00	\$0.9775	\$250,000	\$21.95	\$3,622,375	\$79,350,000	\$75,727,625	4.565%
Empire District Electric	6/15/2006	3,795,000	\$20.25	\$0.8600	\$250,000	\$19.32	\$3,513,700	\$76,848,750	\$73,335,050	4.572%
Great Plains Energy Inc.	5/12/2009	11,500,000	\$14.00	\$0.4900	\$500,000	\$13.47	\$6,135,000	\$161,000,000	\$154,865,000	3.811%
Great Plains Energy Inc.	5/17/2006	7,002,450	\$27.50	\$0.8938	\$500,000	\$26.53	\$6,758,790	\$192,567,375	\$185,808,585	3.510%
Hawaiian Electric Industries, Inc.	12/2/2008	5,750,000	\$23.00	\$0.8625	\$300,000	\$22.09	\$5,259,375	\$132,250,000	\$126,990,625	3.977%
Hawaiian Electric Industries, Inc.	3/10/2004	2,300,000	\$51.86	\$2.0744	\$150,000	\$49.72	\$4,921,120	\$119,278,000	\$114,356,880	4.126%
IDACORP, Inc.	12/9/2004	4,025,000	\$30.00	\$1.2000	\$300,000	\$28.73	\$5,130,000	\$120,750,000	\$115,620,000	4.248%
Otter Tail Corporation	9/19/2008	5,175,000	\$30.00	\$1.0875	\$400,000	\$28.84	\$6,027,813	\$155,250,000	\$149,222,188	3.883%
Otter Tail Corporation	12/7/2004	3,335,000	\$25.45	\$0.9500	\$300,000	\$24.41	\$3,468,250	\$84,875,750	\$81,407,500	4.086%
Pinnacle West Capital Corp.	4/8/2010	6,900,000	\$38.00	\$1.3300	\$190,000	\$36.64	\$9,367,000	\$262,200,000	\$252,833,000	3.572%
Pinnacle West Capital Corp.	4/27/2005	6,095,000	\$42.00	\$1.3650	\$250,000	\$40.59	\$8,569,675	\$255,990,000	\$247,420,325	3.348%
PNM Resources, Inc.	12/6/2006	5,750,000	\$30.79	\$1.0780	\$250,000	\$29.67	\$6,448,500	\$177,042,500	\$170,594,000	3.642%
PNM Resources, Inc.	3/23/2005	3,910,000	\$26.76	\$0.8697	\$200,000	\$25.84	\$3,600,527	\$104,631,600	\$101,031,073	3.441%
Portland General Electric Company	3/5/2009	12,477,500	\$14.10	\$0.4935	\$375,000	\$13.58	\$6,532,646	\$175,932,750	\$169,400,104	3.713%
Portland General Electric Company	6/12/2007	23,658,106	\$26.00	\$0.7800	\$700,000	\$25.19	\$19,153,323	\$615,110,756	\$595,957,433	3.114%
Southern Company	12/6/2000	28,750,000	\$28.50	\$0.9200	\$490,000	\$27.56	\$26,940,000	\$819,375,000	\$792,435,000	3.288%
Westar Energy, Inc.	11/4/2010	8,625,000	\$25.54	\$0.8939	\$250,000	\$24.62	\$7,959,888	\$220,282,500	\$212,322,613	3.613%
Westar Energy, Inc.	5/29/2008	6,900,000	\$24.28	\$0.8498	\$325,000	\$23.38	\$6,188,620	\$167,532,000	\$161,343,380	3.694%
Mean							\$10,749,926	\$317,788,207		
WEIGHTED AVERAGE FLOTATION COSTS:										3.383%

Notes:

[i] Underwriting discount was calculated as the market price minus the offering price when not explicitly given in the prospectus.

Constant Growth Discounted Cash Flow Model Adjusted for Flotation Costs - 30 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield Current	[5] Adjusted for Flot. Costs	[6] Zacks Earnings Growth	[7] First Call Earnings Growth	[8] Value Line Earnings Growth	[9] Average Earnings Growth	[10] DCF k(e)	[11] Flotation Adjusted DCF k(e)
American Electric Power Company, Inc.	AEP	\$1.88	\$44.20	4.25%	4.32%	4.47%	3.38%	3.47%	3.00%	3.28%	7.61%	7.76%
Cleco Corp.	CNL	\$1.35	\$42.22	3.20%	3.27%	3.39%	3.00%	3.00%	8.00%	4.67%	7.94%	8.05%
Empire District Electric	EDE	\$1.00	\$21.10	4.74%	4.93%	5.10%	N/A	10.20%	5.50%	7.85%	12.78%	12.95%
Great Plains Energy Inc.	GXP	\$0.87	\$21.19	4.11%	4.24%	4.39%	7.10%	7.20%	5.50%	6.60%	10.84%	10.99%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$26.54	4.67%	4.84%	5.01%	6.35%	6.70%	9.00%	7.35%	12.19%	12.36%
IDACORP, Inc.	IDA	\$1.52	\$45.18	3.36%	3.42%	3.54%	4.00%	4.00%	2.00%	3.33%	6.75%	6.87%
Otter Tail Corporation	OTTR	\$1.19	\$26.63	4.47%	4.59%	4.75%	6.00%	5.00%	N/A	5.50%	10.09%	10.25%
Pinnacle West Capital Corp.	PNW	\$2.18	\$53.04	4.11%	4.25%	4.40%	6.90%	7.50%	6.50%	6.97%	11.22%	11.37%
PNM Resources, Inc.	PNM	\$0.58	\$20.93	2.77%	2.93%	3.03%	8.35%	9.30%	16.00%	11.22%	14.14%	14.25%
Portland General Electric Company	POR	\$1.08	\$28.30	3.82%	3.89%	4.03%	4.07%	1.99%	5.50%	3.85%	7.74%	7.88%
Southern Company	SO	\$1.96	\$43.77	4.48%	4.59%	4.75%	4.98%	4.86%	5.00%	4.95%	9.54%	9.70%
Westar Energy, Inc.	WR	\$1.32	\$29.92	4.41%	4.57%	4.73%	6.38%	7.50%	7.50%	7.13%	11.70%	11.86%
PROXY GROUP MEAN											10.21%	10.36%

Notes:

The proxy group DCF result is adjusted for flotation costs by dividing each company's expected dividend yield by (1 - flotation cost). The flotation cost adjustment is derived as the difference between the unadjusted DCF result and the DCF result adjusted for flotation costs.

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

[5] Equals [4] / (1 - 0.0338)

[6] Source: Zacks

[7] Source: Yahoo! Finance

[8] Source: Value Line

[9] Equals Average([6], [7], [8])

[10] Equals [4] + [9]

[11] Equals [5] + [9]

[12] Equals average [11] - average [10]

DCF Result Adjusted For Flotation Costs: 10.36%

DCF Result Unadjusted For Flotation Costs: 10.21%

Difference (Flotation Cost Adjustment): 0.15% [12]

Proxy Group Capital Structure

Company	Ticker	% Long-Term Debt								Average
		2012Q3	2012Q2	2012Q1	2011Q4	2011Q3	2011Q2	2011Q1	2010Q4	
American Electric Power Company, Inc.	AEP	47.17%	47.82%	48.54%	47.06%	47.29%	49.15%	49.93%	50.02%	48.37%
Cleco Corporation	CNL	50.23%	49.62%	51.62%	51.71%	52.48%	52.25%	53.02%	52.67%	51.70%
Empire District Electric Company	EDE	46.89%	47.50%	47.09%	47.71%	48.05%	49.04%	48.97%	49.07%	48.04%
Great Plains Energy Inc.	GXP	44.67%	50.51%	48.14%	48.07%	48.87%	47.00%	46.41%	47.77%	47.68%
Hawaiian Electric Industries, Inc.	HE	44.30%	44.64%	41.42%	41.63%	42.41%	42.78%	44.14%	44.17%	43.18%
IDACORP, Inc.	IDA	48.47%	49.63%	49.09%	49.41%	49.56%	51.05%	51.16%	53.39%	50.22%
Otter Tail Corporation	OTTR	49.65%	49.77%	49.52%	49.72%	46.64%	46.83%	46.76%	46.84%	48.22%
Pinnacle West Capital Corporation	PNW	43.70%	45.40%	45.64%	45.54%	47.94%	47.56%	47.43%	47.03%	46.28%
PNM Resources, Inc.	PNM	48.92%	49.60%	49.57%	50.07%	47.85%	48.62%	48.45%	48.45%	48.94%
Portland General Electric Company	POR	50.26%	50.53%	50.63%	51.06%	52.10%	52.22%	52.26%	53.17%	51.53%
Southern Company	SO	51.99%	52.78%	53.52%	52.57%	48.86%	49.78%	49.41%	50.73%	51.21%
Westar Energy, Inc.	WR	39.70%	40.62%	39.95%	38.64%	39.34%	40.38%	40.76%	40.63%	40.00%
Mean		47.16%	48.20%	47.89%	47.77%	47.62%	48.06%	48.22%	48.66%	47.95%

Operating Company Capital Structure

Operating Company	Parent	% Long-Term Debt							
		2012Q3	2012Q2	2012Q1	2011Q4	2011Q3	2011Q2	2011Q1	2010Q4
Appalachian Power Company	AEP	55.18%	55.27%	55.38%	55.93%	55.81%	56.86%	58.47%	55.79%
AEP Texas Central Company	AEP	49.95%	51.09%	54.22%	36.23%	39.16%	52.74%	55.01%	55.15%
Indiana Michigan Power Company	AEP	50.39%	50.58%	50.45%	50.87%	50.90%	50.94%	51.14%	51.53%
Kentucky Power Company	AEP	53.54%	53.88%	54.24%	54.39%	54.38%	54.58%	54.50%	55.16%
Ohio Power Company	AEP	45.62%	46.06%	46.51%	47.88%	46.08%	45.66%	45.48%	46.57%
Public Service Company of Oklahoma	AEP	50.31%	51.07%	51.60%	51.48%	51.44%	52.49%	54.79%	53.55%
Southwestern Electric Power Company	AEP	49.58%	50.73%	51.45%	48.15%	48.01%	49.68%	50.42%	50.85%
AEP Texas North Company	AEP	52.45%	52.76%	52.71%	53.07%	53.65%	53.92%	54.12%	54.48%
Kingsport Power Company	AEP	40.08%	40.06%	39.65%	40.44%	41.33%	41.00%	40.88%	42.04%
Wheeling Power Company	AEP	24.64%	26.74%	29.22%	32.13%	32.12%	33.66%	34.47%	35.11%
Cleco Power LLC	CNL	50.23%	49.62%	51.62%	51.71%	52.48%	52.25%	53.02%	52.67%
Empire District Electric Company	EDE	46.89%	47.50%	47.09%	47.71%	48.05%	49.04%	48.97%	49.07%
KCP&L Greater Missouri Operations Company	GXP	41.91%	52.74%	47.76%	47.72%	47.58%	48.41%	45.48%	48.45%
Kansas City Power & Light Company	GXP	47.44%	48.27%	48.52%	48.41%	50.16%	45.59%	47.34%	47.10%
Hawaiian Electric Company, Inc.	HE	44.30%	44.64%	41.42%	41.63%	42.41%	42.78%	44.14%	44.17%
Idaho Power Co.	IDA	48.47%	49.63%	49.09%	49.41%	49.56%	51.05%	51.16%	53.39%
Otter Tail Power Company	OTTR	49.65%	49.77%	49.52%	49.72%	46.64%	46.83%	46.76%	46.84%
Arizona Public Service Company	PNW	43.70%	45.40%	45.64%	45.54%	47.94%	47.56%	47.43%	47.03%
Public Service Company of New Mexico	PNM	48.92%	49.60%	49.57%	50.07%	47.85%	48.62%	48.45%	48.45%
Portland General Electric Company	POR	50.26%	50.53%	50.63%	51.06%	52.10%	52.22%	52.26%	53.17%
Georgia Power Company	SO	50.39%	52.10%	49.83%	48.27%	48.06%	49.27%	48.83%	48.68%
Alabama Power Company	SO	52.48%	53.19%	54.43%	53.47%	52.71%	53.29%	53.54%	53.46%
Gulf Power Company	SO	51.27%	51.69%	51.65%	52.39%	52.21%	52.55%	52.48%	53.29%
Mississippi Power Company	SO	53.83%	54.12%	58.18%	56.17%	42.46%	44.01%	42.79%	47.49%
Kansas Gas and Electric Company	WR	40.73%	41.70%	42.15%	42.45%	42.30%	43.23%	43.48%	43.00%
Westar Energy (KPL)	WR	38.68%	39.54%	37.74%	34.82%	36.37%	37.53%	38.04%	38.26%

Source: SNL Financial

Proxy Group Capital Structure

Company	Ticker	% Common Equity								Average
		2012Q3	2012Q2	2012Q1	2011Q4	2011Q3	2011Q2	2011Q1	2010Q4	
American Electric Power Company, Inc.	AEP	52.83%	52.18%	51.46%	52.94%	52.71%	50.85%	50.07%	49.98%	51.63%
Cleco Corporation	CNL	49.77%	50.38%	48.38%	48.29%	47.52%	47.75%	46.98%	47.33%	48.30%
Empire District Electric Company	EDE	53.11%	52.50%	52.91%	52.29%	51.95%	50.96%	51.03%	50.93%	51.96%
Great Plains Energy Inc.	GXP	55.33%	49.49%	51.86%	51.93%	51.13%	53.00%	53.59%	52.23%	52.32%
Hawaiian Electric Industries, Inc.	HE	55.70%	55.36%	58.58%	58.37%	57.59%	57.22%	55.86%	55.83%	56.82%
IDACORP, Inc.	IDA	51.53%	50.37%	50.91%	50.59%	50.44%	48.95%	48.84%	46.61%	49.78%
Otter Tail Corporation	OTTR	50.35%	50.23%	50.48%	50.28%	53.36%	53.17%	53.24%	53.16%	51.78%
Pinnacle West Capital Corporation	PNW	56.30%	54.60%	54.36%	54.46%	52.06%	52.44%	52.57%	52.97%	53.72%
PNM Resources, Inc.	PNM	51.08%	50.40%	50.43%	49.93%	52.15%	51.38%	51.55%	51.55%	51.06%
Portland General Electric Company	POR	49.74%	49.47%	49.37%	48.94%	47.90%	47.78%	47.74%	46.83%	48.47%
Southern Company	SO	48.01%	47.22%	46.48%	47.43%	51.14%	50.22%	50.59%	49.27%	48.79%
Westar Energy, Inc.	WR	60.30%	59.38%	60.05%	61.36%	60.66%	59.62%	59.24%	59.37%	60.00%
Mean		52.84%	51.80%	52.11%	52.23%	52.38%	51.94%	51.78%	51.34%	52.05%

Operating Company Capital Structure

Operating Company	Parent	% Common Equity							
		2012Q3	2012Q2	2012Q1	2011Q4	2011Q3	2011Q2	2011Q1	2010Q4
Appalachian Power Company	AEP	44.82%	44.73%	44.62%	44.07%	44.19%	43.14%	41.53%	44.21%
AEP Texas Central Company	AEP	50.05%	48.91%	45.78%	63.77%	60.84%	47.26%	44.99%	44.85%
Indiana Michigan Power Company	AEP	49.61%	49.42%	49.55%	49.13%	49.10%	49.06%	48.86%	48.47%
Kentucky Power Company	AEP	46.46%	46.12%	45.76%	45.61%	45.62%	45.42%	45.50%	44.84%
Ohio Power Company	AEP	54.38%	53.94%	53.49%	52.12%	53.92%	54.34%	54.52%	53.43%
Public Service Company of Oklahoma	AEP	49.69%	48.93%	48.40%	48.52%	48.56%	47.51%	45.21%	46.45%
Southwestern Electric Power Company	AEP	50.42%	49.27%	48.55%	51.85%	51.99%	50.32%	49.58%	49.15%
AEP Texas North Company	AEP	47.55%	47.24%	47.29%	46.93%	46.35%	46.08%	45.88%	45.52%
Kingsport Power Company	AEP	59.92%	59.94%	60.35%	59.56%	58.67%	59.00%	59.12%	57.96%
Wheeling Power Company	AEP	75.36%	73.26%	70.78%	67.87%	67.88%	66.34%	65.53%	64.89%
Cleco Power LLC	CNL	49.77%	50.38%	48.38%	48.29%	47.52%	47.75%	46.98%	47.33%
Empire District Electric Company	EDE	53.11%	52.50%	52.91%	52.29%	51.95%	50.96%	51.03%	50.93%
KCP&L Greater Missouri Operations Company	GXP	58.09%	47.26%	52.24%	52.28%	52.42%	51.59%	54.52%	51.55%
Kansas City Power & Light Company	GXP	52.56%	51.73%	51.48%	51.59%	49.84%	54.41%	52.66%	52.90%
Hawaiian Electric Company, Inc.	HE	55.70%	55.36%	58.58%	58.37%	57.59%	57.22%	55.86%	55.83%
Idaho Power Co.	IDA	51.53%	50.37%	50.91%	50.59%	50.44%	48.95%	48.84%	46.61%
Otter Tail Power Company	OTTR	50.35%	50.23%	50.48%	50.28%	53.36%	53.17%	53.24%	53.16%
Arizona Public Service Company	PNW	56.30%	54.60%	54.36%	54.46%	52.06%	52.44%	52.57%	52.97%
Public Service Company of New Mexico	PNM	51.08%	50.40%	50.43%	49.93%	52.15%	51.38%	51.55%	51.55%
Portland General Electric Company	POR	49.74%	49.47%	49.37%	48.94%	47.90%	47.78%	47.74%	46.83%
Georgia Power Company	SO	49.61%	47.90%	50.17%	51.73%	51.94%	50.73%	51.17%	51.32%
Alabama Power Company	SO	47.52%	46.81%	45.57%	46.53%	47.29%	46.71%	46.46%	46.54%
Gulf Power Company	SO	48.73%	48.31%	48.35%	47.61%	47.79%	47.45%	47.52%	46.71%
Mississippi Power Company	SO	46.17%	45.88%	41.82%	43.83%	57.54%	55.99%	57.21%	52.51%
Kansas Gas and Electric Company	WR	59.27%	58.30%	57.85%	57.55%	57.70%	56.77%	56.52%	57.00%
Westar Energy (KPL)	WR	61.32%	60.46%	62.26%	65.18%	63.63%	62.47%	61.96%	61.74%